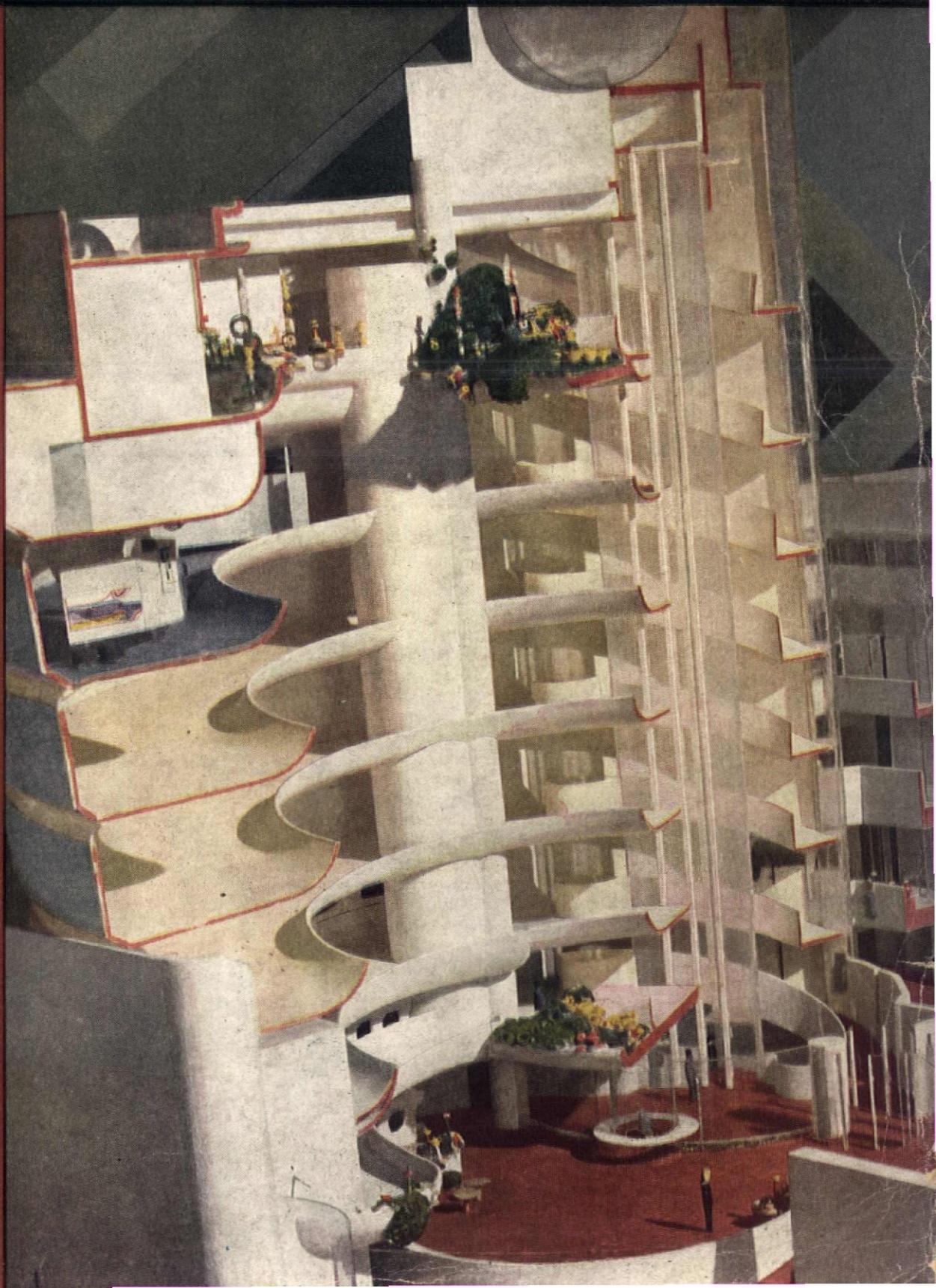


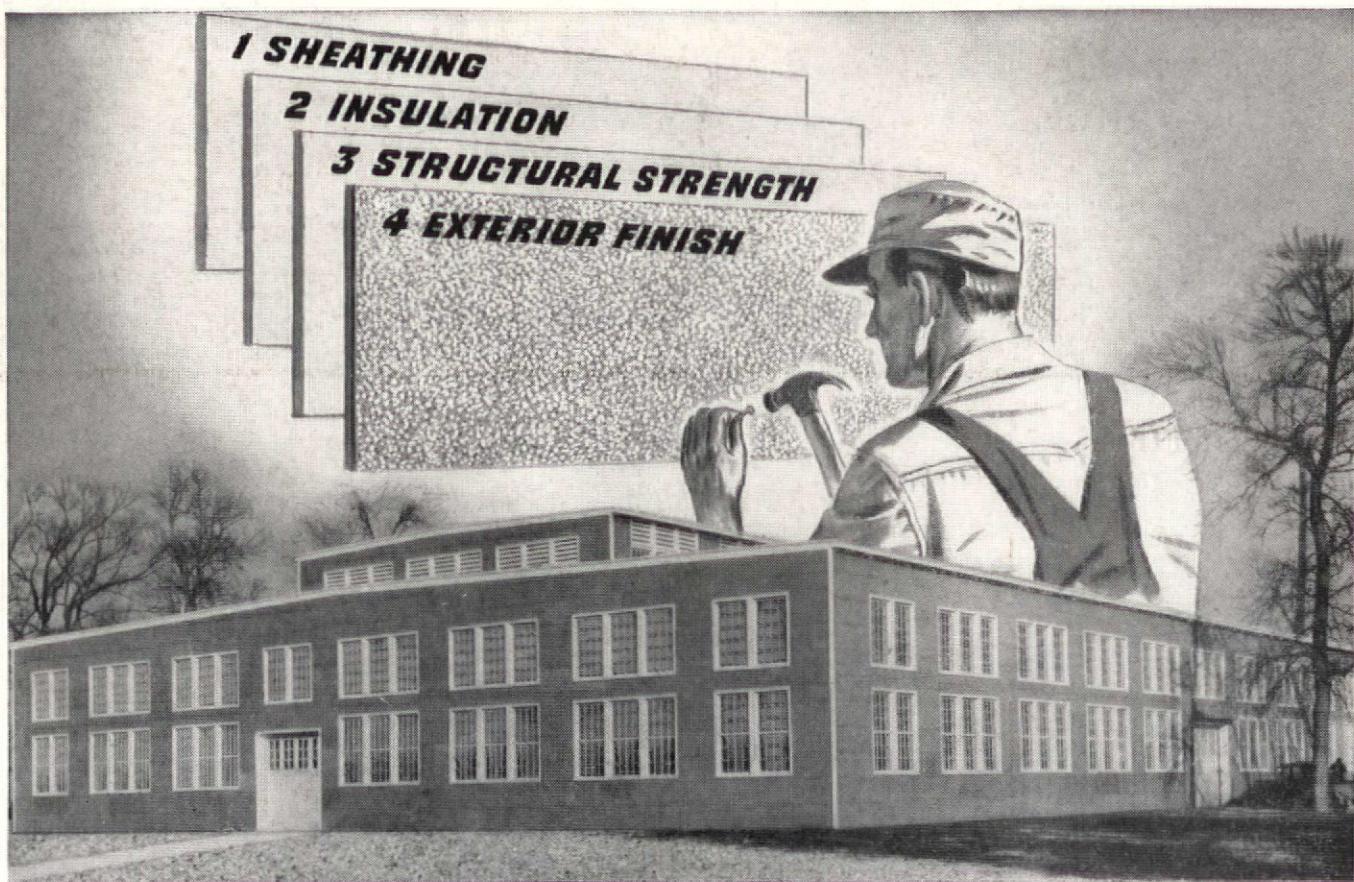
The Architectural

# FORUM

Magazine of Building



January 1946



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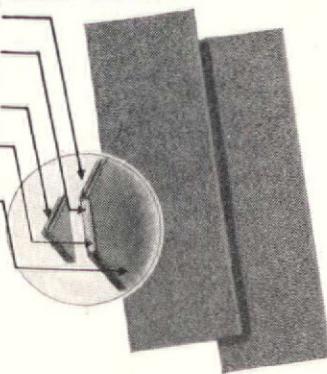
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The Architectural

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Magazine of Building

JANUARY 1946

Published by TIME Incorporated

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The Architectural FORUM is published monthly by TIME Inc., 350 Fifth Ave., N. Y. 1, N. Y. Subscription may be sent to publisher's office or to 330 East 22nd Street, Chicago 16, Ill. Address all editorial correspondence to 350 Fifth Ave., N. Y. 1, N. Y. Yearly subscription payable in advance. U. S. and Possessions, Canada, Mexico, South America, \$4.00. Elsewhere \$6.00. Single issues, including Reference Numbers, \$1.00. All copies mailed flat. Copyright under International Copyright Convention. All rights reserved under the Pan American Copyright Convention. Entered as Second Class Matter July 17, 1944 at the Post Office at New York, N. Y., under the Act of March 3, 1879. Copyright 1944 by Time Inc.

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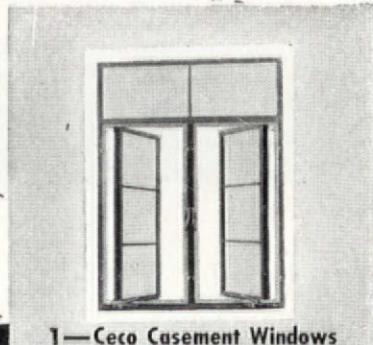


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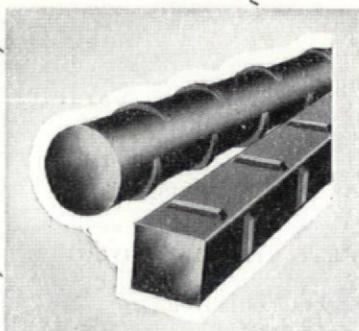
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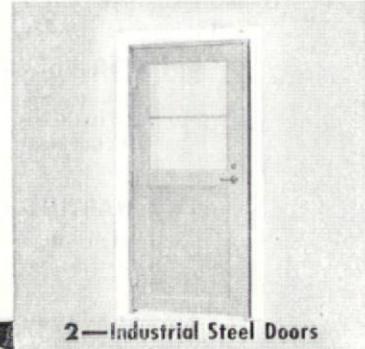
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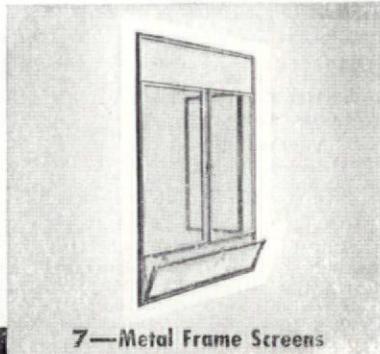
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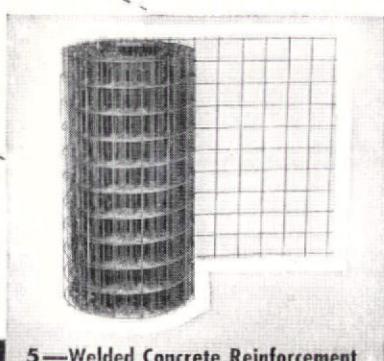
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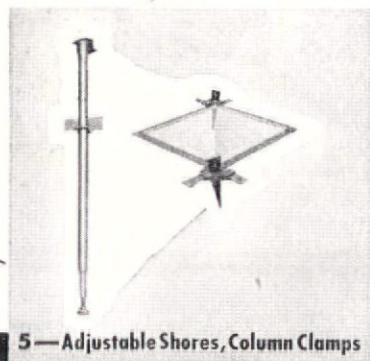
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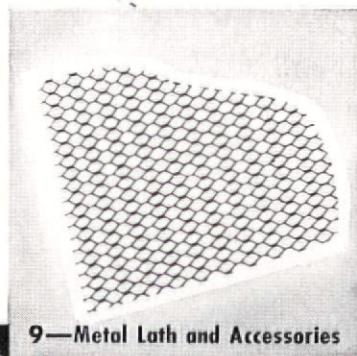
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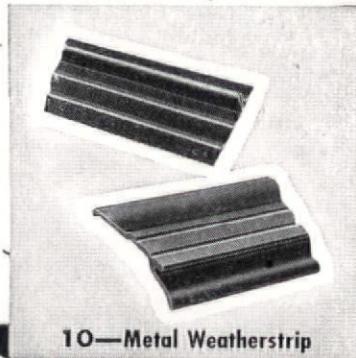
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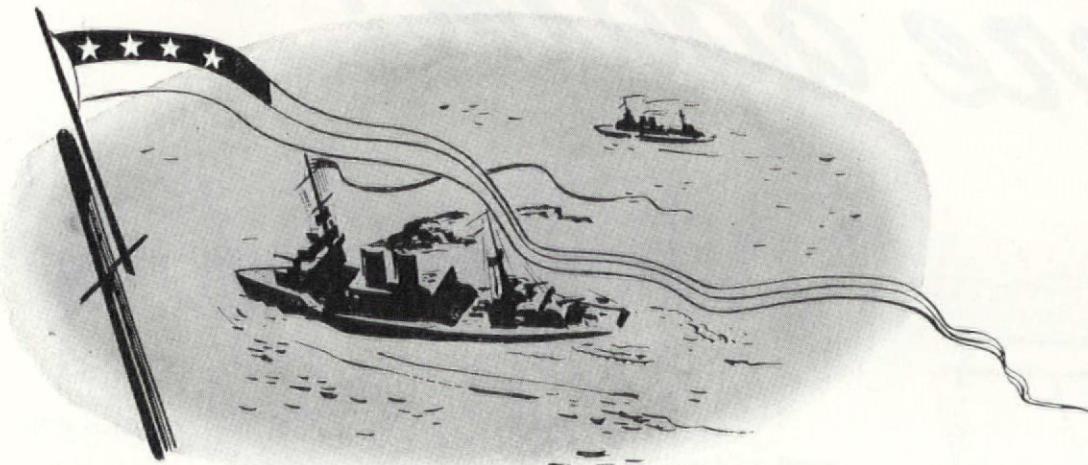
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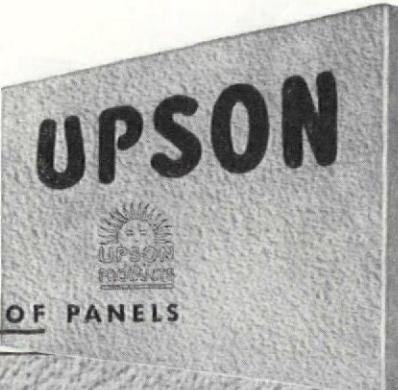
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# NEWS

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**BUILDING MONTH.** It was increasingly doubtful that 1946 would be the Year of the Miracle (or factory-delivery-by-helicopter) House. It was equally unlikely that 1946 would be the Year of Urban Rebuilding — or the Year of Two Airplanes in Every Far-Flung Garage. And in spite of some gloomy forebodings from the atomic experts, it would not yet be the Year of the Burrowing Underground. In fact, the next year in Building was already named: it would be the Year of the Great Housing Shortage.

Housing famine had already produced a national bellyache gripping enough to demand a complete reverse of reconversion signals. The President himself had decisively clicked the switch. The new plan would give housebuilding top priority on the nation's short supply of building materials — and give veterans top priority on houses.

Even at that, the U. S. would build less houses this year than many had hoped. The new priority system was based on an estimate of 400,000 houses for 1946. Total new building, government forecasters thought, would amount to about \$7½ billion (last year's total: \$4½ billion). Added to this would be a whacking \$5 billion expenditure for long-deferred maintenance and repair.

In spite of a multitude of sore spots, Building was making more immediate headway than had been expected. When all the figures were in, November showed a sharp and contraseasonal upturn in residential building and December promised to continue the rise. But the upturn, compared with the vast maw of housing need (some 3,600,000 families will lack homes before the year's end) was only a tantalizing trickle.

Priorities would help, but there were still plenty of hurdles. Sample: the boggled veterans' home loan program, from which Congress had just snipped some red tape, now faced a complete stall for 90 days. The Veterans Administration thought it might take that long to write the new regulations which will put into effect the Congressional boost of guaranty ceiling from \$2,000 to \$4,000, make other changes in lending procedure.

With federal dollars now available to help out, cities enthusiastically took to Quonset Huts, idle military barracks, every kind of emergency housing. In late December, Senator Harvey Kilgore (Dem., W. Va.) and Senator Hugh Mitchell (Dem., Wash.) proposed a \$5 million federal loan fund to launch a prefab solution of the housing crisis. The Senators jointly introduced a bill which would enable the federal government to place mass orders for prefab housing and to make loans to local agencies to assist them in financing purchases of houses for resale or rent to veterans. The Senators hoped not only to tap a quick supply of housing, but also to stimulate use of new materials — aluminum, magnesium, plastics — and to find a new job for surplus war plants.

While almost every political figure offered a cure-all for the housing crisis, Congress plugged away at the long-term housebuilding job. The Wagner-Ellender-Taft bill was scheduled to get Senate approval by the month's end, faced a tougher going-over in the House. Meantime, New York City looked at a plan to clear all its slums

in ten years with some help from the sales tax.

If 1946 was the Year of the Great Housing Shortage, 194X — the year when Building would be turning out a million and a quarter houses and rebuilding city slums — was getting much, much closer.

## HOUSES

### PRIORITIES

#### Building materials earmarked to build 400,000 houses for veterans.

Priorities came back to Building last month — with important variations. The new plan was aimed, not to limit building volume, but to boost housebuilding output. It will channel about 50 per cent of all available materials into houses for veterans. Estimate is that this will mean enough to build 400,000 houses over the next year. All of them must sell for \$10,000-or-less or rent for \$80-or-less.

The priorities plan added up to a complete reversal of Washington's earlier let-Building-have-its-head point of view. And even the most embattled sectors of the housebuilding industry, who had fought tooth-and-nail for removal of all controls, now welcomed a return to priorities. Reason: fixing and building stores, bars, factories was stealing the lean materials supply.

On January 15, any housebuilder may apply to his local Federal Housing Administration office for an H-H priority. To get it, he must submit a general description of the house he plans to build (but not detailed plans and specifications) and a statement of selling price or rent. He must agree to hold the house for 30 days for a veteran or merchant seaman customer. He must be ready to start building within 60 days. Re-sale kiting is banned.

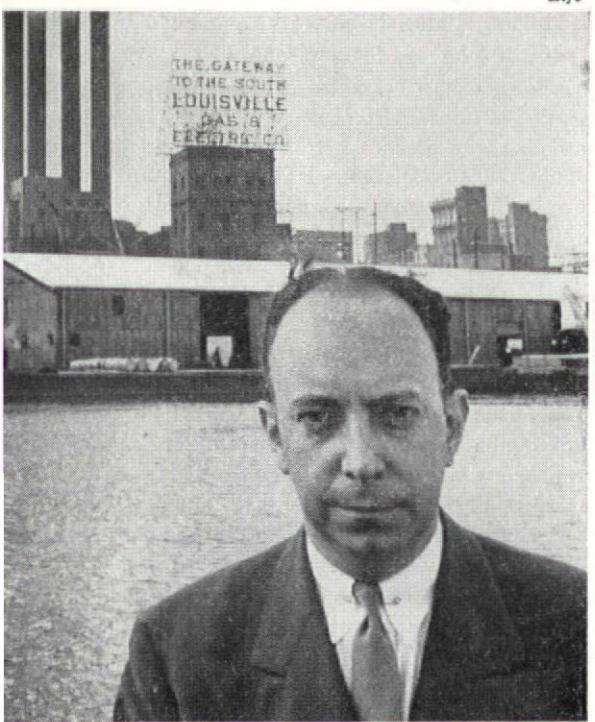
H-H priorities will give housebuilders first choice in buying ten critical building materials. Producers and distributors will be required to set aside a certain percentage for housebuilding. Percentages and materials are:

	Per Cent
Construction lumber	35
Cast iron soil pipe	35
Cast iron radiation	69
Bathtubs	50
Brick	50
Gypsum products	45
Structural tile	11
Clay sewer pipe	2
FHA, in processing priority applications,	

will make a rough check to protect veteran customers from paying \$10,000 for a \$5,000 house. If too many builders aim for the \$10,000 ceiling, price quotas will be established. But the major job of preventing a black market in house prices or in house values will be up to the local communities. All builders using H-H priorities will be required to put up a sign labeling his job as "Veterans' Housing" and stating the selling price or rent. The Civilian Production Administration will also spot-check prices.

To make the new plan work, President Truman (reportedly with some prompting from Postmaster Robert Hannegan) reached out for Louisville's ex-Mayor, asked Wilson Wyatt to take on the job of "housing expediter." The President had to ask three times. Wyatt, who spark-plugged Louisville's famous area-wide development

*Life*



**Housing Boss Wilson W. Wyatt**

plan (FORUM, March, '44) was not anxious to take on one of the toughest jobs in Washington. His assignment will be less to boss housing priorities than to work on the much tougher problem of boosting materials supply. Rumor had it that he might soon be offered another job: NHAdministrator John Blandford was said to be ready to step out of housing for government service in China.

Industry representatives attending the Washington conference on housing in mid-December viewed the just-announced priority plan with some doubts. H. R. Northup of the National Retail Lumber Dealers Association summed them up: "The only real answer is to stimulate materials production. When the people who are supposed to get priorities walk in and don't get them, all hell will break loose again."

Others pointed to a large loophole in the housing-for-veterans plan. It establishes

no quotas for, and offers no assurance of rental housing—although an estimated 70 per cent of all veterans are looking for houses to rent.

## BETTER THAN PUP-TENTS

### Federal dollars pay the moving bill as cities snap up temporary houses.

Last month many a city abruptly dropped its reluctance to accept emergency answers for an emergency problem. While New York prepared to set up 5,000 Quonset Huts, the *Times* conceded: "There is nothing basically wrong with the Quonset Hut that money and a few added bathrooms won't fix. It is better than a pup tent."

Demobilized war houses—only recently viewed with disdain—now became the object of eager municipal competition. The veterans had to be housed somehow—anyhow.

**Federal Dollars.** One big reason for the sudden popularity of the temporary war houses was the good news that the federal government will pay for the transfer and re-erection of about 100,000 units. Late in December Congress voted \$191 million of unused Lanham Act (war housing) money to do the job, also pay for converting closed-down military barracks to housing for veterans and their families.

Almost everybody was getting used to the idea that there was no place like home—be it ever so demountable. Newark prepared to move in 300 temporary houses, after a running fight with real estate spokesmen who said that the redwood prefabs would "depress real estate values."

**Corn Cribs and Bombers.** In Cleveland a federal auditor proposed that discarded B-29s and Liberator bombers be turned into houses. Shenandoah, Iowa bought 84 corn cribs from the Commodities Credit Corp. for conversion to houses.

In New York, R. H. Macy and Gimbel Bros. raced each other for page ads in the *New York Times* which offered to solve everybody's housing problem by delivering a prefab. Macy's, which had long ago agreed to distribute F. Vaux Wilson's Precision-Built house (FORUM, Nov. '44), had nothing on hand to offer hungry buyers but adjectives, will not be able to quote prices or take orders until spring. Gimbel's promised immediate delivery of a \$2,399 house, threw in a manual of instructions for site construction, which the buyer will have to manage without any help from good old Gimbel's. Tovell Construction Co., Baltimore, supplied the Gimbel house, a redesigned version of the house the company produced for Lend-Lease shipment to Britain. Gimbel's got 25 orders the first day.

Buckminster Fuller's round aluminum Dymaxion house (for which the first full-size model was recently completed) came in for new attention. The Federal Public Housing Authority's J. Russel Cravens went

to Wichita to take a look, came back with the proposal that FPHA buy some Dymaxions to ease the emergency.

**Prefabbers Quiet.** But, on the whole, the prefabricated industry was surprisingly lacking in any proposals for leaping into the housing breach. Many a prefabricator said flatly: Houses would not be produced until quality materials are available in quantity; the industry had already lost merchandise ground by its war identification with "temporary" and "minimum" houses.

Here and there, cities looked for ways to meet the emergency that would help out on long-range building needs. In Milwaukee, builders devised a plan for building houses that might be temporarily partitioned to make room for two families, finished off for single occupancy when the pinch is past. Kansas City, Mo. considered building two-car garages that would be fitted as homes for emergency occupancy. Biggest housebuilding promise of the month came from Newark builder Charles H. Reis who said he would move into Massachusetts, build 1,000 houses before May 1.

## POLITICAL STUFF

### Big talk builds few houses as politicos vie for housing spotlight.

Some 3,600,000 Americans would lack homes by next year, the National Housing Administrator said. That all of these doubled-up, house-poor families would have votes, including 1,600,000 powerful, organized veterans, was plain to every U. S. politico. Last month most of them were embroiled in a noisy tilt with the housing shortage. Some had programs. Others simply viewed with alarm.

While builders in New York State sought vainly for access to war surplus stockpiles of building materials, Governor Thomas E. Dewey, retiring Mayor Fiorello LaGuardia and incoming Mayor William O'Dwyer competed for headlines. Roaring through Manhattan back of a police escort and followed by five carloads of retinue, reporters and photographers, Governor Dewey took a look at the military installations he hopes to convert to emergency housing (see cuts right). Still plugging for remodeling to stow homeless New Yorkers in basements and attics, Mayor LaGuardia sniffed at political "stunts."

Like many another nonplussed administrator, incoming Mayor O'Dwyer had appointed a committee. Acerbic chairman Robert Moses, in the customary clatter of slamming doors and hurt feelings, looked for a tidy way out of the mess. Advising the city to buy 5,000 Quonset huts, the Moses investigations also turned up the shape of a coming battle. This was evident when Moses pared Charles G. Bolte, able young head of the young American Veterans Committee, from his committee list—reportedly at the request of the jealous American Legion.

The Legion's jealousy was not without foundation. Writing to the *New York Times*, "A Disgusted Marine" spoke for many: "The only organization making an effort to help needy veterans obtain homes as been the American Veterans Committee, which has done a whale of a job. Remember this, vets, when your membership is solicited by veterans' organizations."

Public housing veteran Nathan Straus waded into the muddle, fighting his own encient war with the "real estate interests and reactionary groups" who "planned carefullly for the shortage that exists". Straus saw a conspiracy to mulct veterans of their government benefits and saddle them with homes they can't afford.

In New Jersey Governor Walter Edge was busy calling conferences on the housing crisis. In Michigan Governor Harry Kelly moved to retain temporary war housing, now being eagerly sought by out-of-state cities. From Dallas, Mayor Woodall Rogers arrived in Washington to demand federal emergency housing. United Auto Workers' R. J. Thomas took time out from the biggest strike in U. S. history to outline a plan for meeting the crisis. Even Captain Harold E. Stassen, former governor of Minnesota, leaped into print with an 11-point program.

At month's end only thing clear was that no one had won votes, many had lost some.

## THE LOW-DOWN

## Everybody but Building has it.

On the spot as never before, Building was running out of chins on which to take it. Westbrook Pegler pegged the trouble on the "vicious greed of local plumbing and electrical contractors and manufacturers of building supplies." Sylvia Porter, financial columnist for the leftish *New York Post*, observed: "The powerful real estate interests today are much more intent on winning their fight against the DPA and future price control than in providing shelter for Americans."

But the roundhouse wallop came from *Life* magazine, which speaks to an estimated 20 million (counting over-shoulder bookers). In nine pages of pictures and charts (see cuts, next page), *Life* dramatized the nation's house-hunger, documented Building's ancient woes. Its editorial conclusion:

"Never was there an industry which so little deserved the coming boom or was so unready to rise to the occasion . . . if the housing industry had done even a passable job in 1910-1940, we would not be in this jam today. . . .

"As now organized, the building industry just doesn't give enough house for the money. It has allowed the industrial revolution to pass it by and it has shamefully neglected its biggest market—the small house. . . . At present the average corporation in this field has less capital and its workers have less machinery to work

(Continued on page 8)

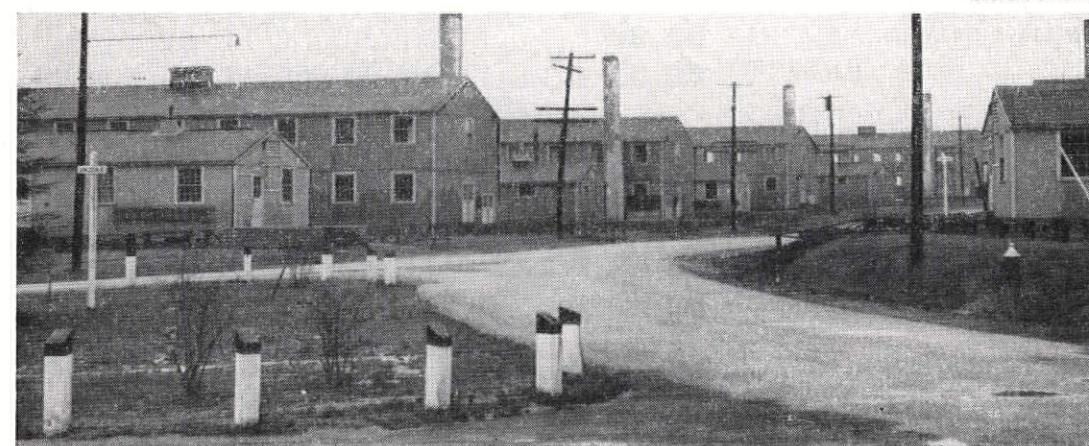


**HOUSING INDUSTRY** looks at 1946 prospects at Washington Industry-government conference opened by Civilian Production Administrator John D. Small (r.) Among the conferees (l. to r., above): B. L. Knowles and H. E. Foreman, Associated General Contractors; James Follin and L. C. Hart, Producers' Council; F. Stuart Fitzpatrick, U. S. Chamber of Commerce; James R. Edmunds, American Institute of Architects.

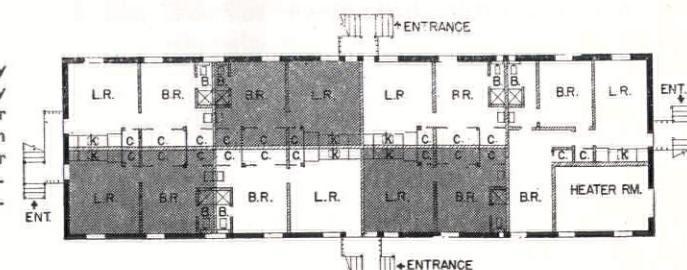


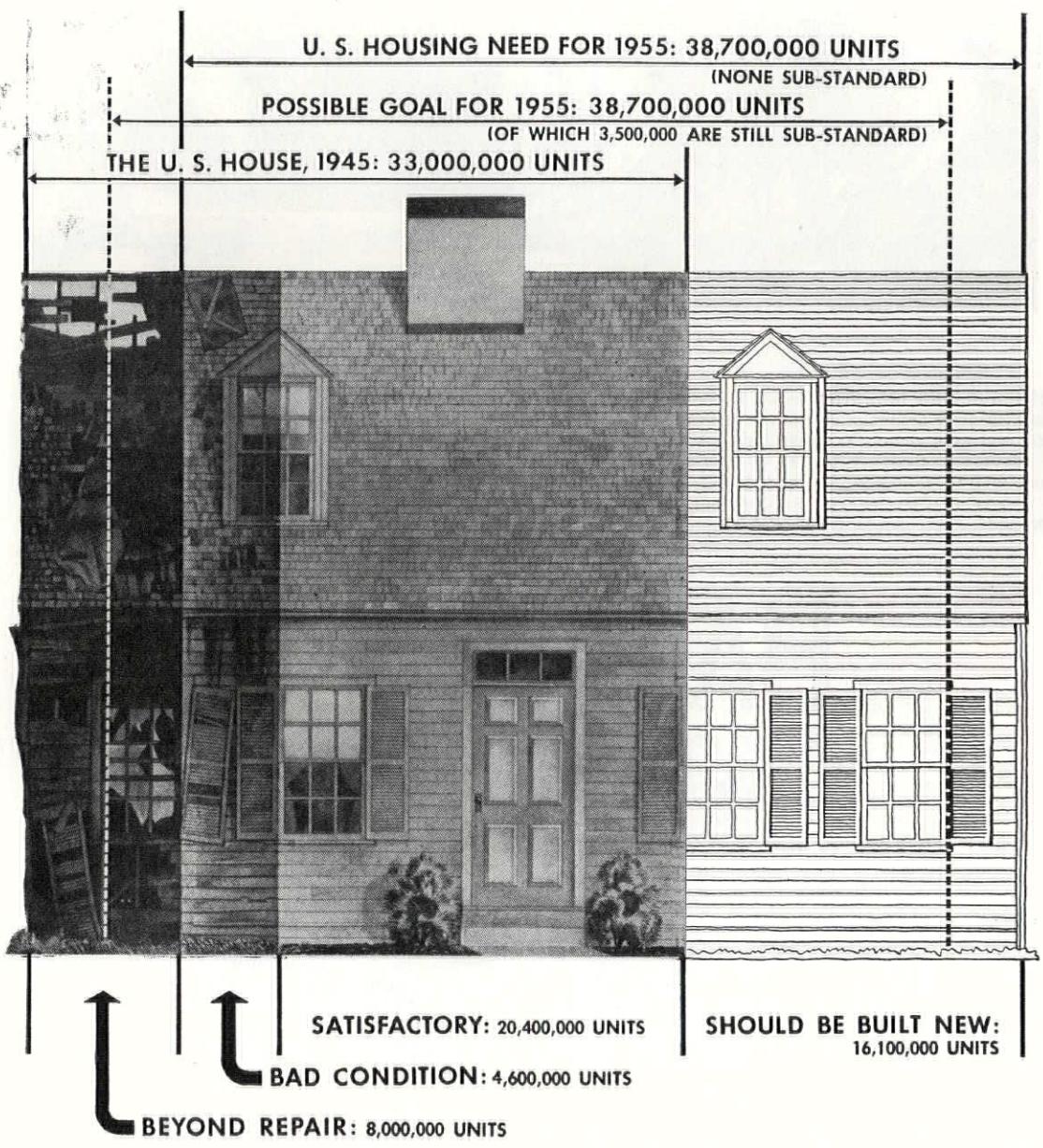
**OVER-THE-COUNTER PREFABS** are offered by New York's two biggest stores. Gimbel's and Macy's leap into the housing emergency with big newspaper ads. But Macy's can't take orders for well-known Precision-Built house till spring, while Gimbel's gives no help in erecting \$2,399 house, which PM wrathfully estimated might cost buyers another \$2,500.

Harold T. Moore

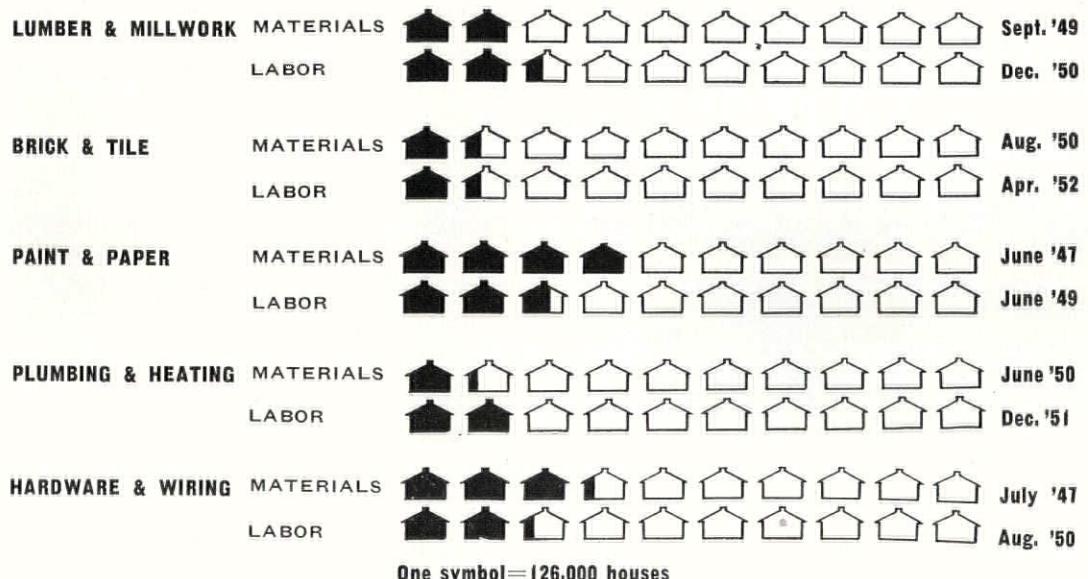


**AT FOX HILLS**, Staten Island, N. Y., 35 2-story and 50 1-story cantonments are the first army barracks to furnish make-over housing for veterans. State Housing Commissioner Herman L. Stichman called the installation a "major windfall"; it has 19 lavatories, including hundreds of plumbing fixtures. Two-room apartments, (plan, right), will predominate.





**LIFE CHART** (adapted by FORUM) shows how many houses the U. S. needs to build over the next ten years and the condition of its existing housing. Even if we build 1/4 million houses every year for the next decade, we will not be able to meet estimated need of 16,100,000 new houses or to tear down all slums. About 3½ million substandard houses would still be standing.



**BLACKED-IN HOUSE SYMBOLS** show how many houses can be built with present rate of supply of basic building materials and of skilled building labor. Dates show when LIFE thinks enough materials and labor will be available for 1,260,000 houses a year. Plumbing and heating equipment shows as biggest current shortage (only enough for 150,000 houses). Bricklayers show as most permanent barrier (short until 1952).

with than any other major industry, even including agriculture."

Nothing the government has done, *Life* thought, has helped much. "Indeed, its liberal credit policies probably helped to postpone changes."

*Life* saw only two glimmers of hope: (1) the prefabricator, "who has at least made a start at cheaper construction methods" and (2) the operative builder "who has improved housing values in or near large cities through his integrated control of all steps in the building process." "As these modern housewrights gain dominance over their chaotic industry, they may become the agents of a needed technological revolution in the house itself."

## PEOPLE

### BUILDER TUNNEY

**The Champ is back, matching at all weights.**

Gene Tunney, ex-heavy-weight champ, entered the Building ring last month as president of the newly-incorporated Stamford Building Co., Stamford, Conn.

Sparring carefully, Tunney declared that the company would stress low-cost houses in and around Stamford, "not neglecting the possibility of building \$60,000 homes".

Tunney resumed his career as a businessman after the five-year interval in which, as a U.S.N.R. Commander, he directed the Navy's Physical education program.

Incorporation papers named Arthur M. Starck, president of the Unique Window Sash Company, New York, secretary-treasurer and John J. Ryan, New York, as the third incorporator.

Tunney said the new company will act as its own general contractor. Builder Tunney's previous activities have included chairmanship of the board of the American Distilling Co., and membership on the board of the Morris Plan Bank, the Greenfield Tap and Die Co. and the Marlboro Cotton Mills.

### CHICAGO WINNERS

**Three young planners do the town.**

The *Herald-American* "Better Chicago" contest crowded another trophy onto the Saarinen and Swanson mantel this month. Winners of the Hearst newspaper's \$10,000 first prize for an overall city plan were the firm's David S. Geer, Edward W. Waugh and George Matsumoto. All three are under 40.

Geer, head of S. and S's city planning department, is a 38-year-old New En-



Gene Tunney



Winners Geer, Waugh, Matsumoto

lander. Waugh, 33, was born in Johannesburg, South Africa, worked on plans for the Kaiser-Hughes giant cargo flying-boat. He is now busy on a regional plan for the Willow-Run-Eastern Washtenaw County area. Youngest of the trio, George Matsumoto, 23, is a San Francisco-born Japanese-American.

The contest, which opened last April, attracted many well-known architectural and planning names. Second main (\$5,000) prize winners, were Ernest A. Grunsfeld, Jr., William K. Koenig, Wallace F. Yerkes and Louis Wirth, all of Chicago. Third award (\$2,000) went to Ann Horn and Leroy Binkley, Glencoe.

## BUILDING MONEY

### VETERANS LOAN BOOST

Government guarantee raised to \$4,000.

The Santa Ana (Calif.) Building and Loan Association threw up its hands, cancelled 30 veterans' home loans. The Association said it was tired of filling out 14 separate forms stretching nearly 20 ft. in length. Furthermore, the Veterans Administration was stalling on processing.

When the Association's weary voice reached UP wires, VA officials hurried to the rescue, promised to accelerate procedure, pare red tape. But the Santa Ana squabble was only a sample of the national discontent with the whole veterans' home loan program. Last month Congress finally made up its mind to untangle some of the snarls. House and Senate agreed to:

- 1) Increase the government guarantee from the present limit of \$2,000 to \$4,000.
- 2) Accelerate loan processing by providing guarantee of any loan agreed to by borrower, lender and a VA-certified appraiser. Heretofore, all loans have had to be submitted to VA for approval.

### W-E-T BILL PROGRESS

Senators muffle opposition, prepare to approve bill by month's end.

Public unrest about housing was helping mightily to speed the Wagner-Ellender-Taft bill (S. 1592) through Congress. Already Representative Ellis Patterson (Dem.,

Calif.) had introduced a duplicate bill in the House.

Listening drowsily to long-winded testimony, the Senate Banking and Currency Committee, roused itself principally to bait opposing witnesses—notably Chicago Realtor Newton C. Farr, appearing for the acrobatically opinioned National Association of Real Estate Boards. Primed with quotes from NAREB'S tipsheet, "Headlines", the Senators gleefully read excerpts ostensibly favoring consolidation of government housing functions, housing research and other points which Farr now seemed to believe would endanger every American's right to own a home, and, incidentally, to sell one.

Only private industry spokesman who took rhetorical honors was veteran lobbyist Morton Bodfish, speaking for the U. S. Savings and Loan League. One reason may have been Bodfish's smooth acceptance of the inevitable. Sticking to provisions which concerned private building money, Bodfish wasted no breath belaboring the bill's public housing provisions. Said he: "As is well known, our organization has not approved government housing . . . A growing number in public and private life hold other views . . ."

Bodfish particularly disliked the bill's provision for 90 per cent insurance of apartment house mortgages and 95 per cent insurance of loans made to mutual ownership corporations. "We feel the government can and should retire entirely from the mortgage business."

NHAdministrator John Blandford gave the bill vigorous support. Blandford thinks the provision requiring builders who want FHA insurance to put up a

## PRICES

### PATMAN CURB

Federal price control of houses looms as bill gets Administration backing.

Last month the Office of Price Administration dug up these case histories to document the leaping inflation in house prices:

- A Pittsburgh construction company built a number of houses under priority permits limiting sales price to \$6,000. Within 10 days after L-41 (war building control order) was lifted, the houses were offered for sale to tenants at \$8,000.

- A prominent St. Paul real estate man got priorities for 56 \$6,000 houses. Construction was not completed until L-41 expired, whereupon the houses were sold at \$7,500.

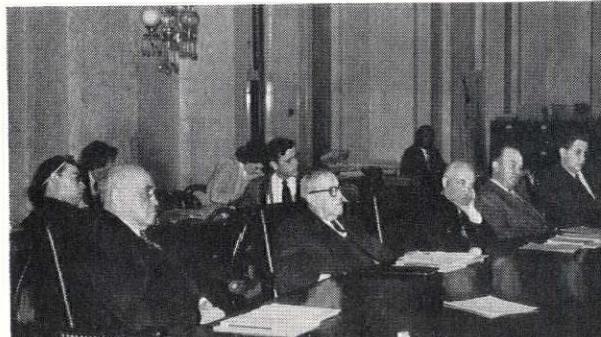
- In a Flint, Mich. subdivision houses priority-built to sell at \$6,400 are now readily finding buyers at \$8,400. Tenants were being warned to buy or move.

OPAdministrator Chester Bowles, fighting hard for the Patman bill (H. R. 4761) to control house prices, said these samples

warranty guaranteeing construction should come out. The government might, he thought, become "involved in a detailed dispute among home owner, builder, materials supplier and craftsman as to final responsibility for defects in construction."

New Federal Housing Commissioner Raymond Foley's approval of the bill was noticeably lukewarm. Canvassing the provisions aimed to help private enterprise reach farther down in the "middle market," Foley said FHA was already doing pretty well, thank you, in getting down to the middle market. His evidence: In 1940, last peacetime year, the valuation of a typical FHA new home was \$5,200 and the family income of the typical borrower was less than \$2,400. Family income of 57 per cent

Reni



SENATORS hearing housing arguments (l. to r.): John H. Bankhead (Ala.), Robert F. Wagner, (N. Y.), Abe Murdock (Utah), E. P. Carville (Nev.), Hugh B. Mitchell (Wash.), all Democrats.

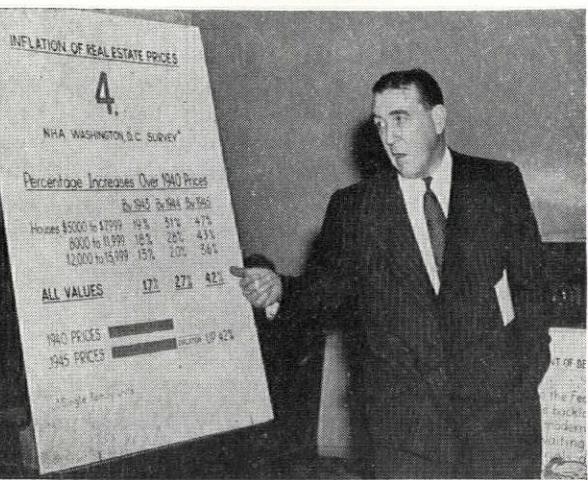
of borrowers was less than \$2,500.

Outlook for the bill was unchanged. Approval of its major points was virtually assured in the Senate—perhaps before January's end. Its future in the House was a good deal less certain.

are typical of how housing crisis is toppling the nation into real estate inflation. He told the House Banking and Currency Committee:

"I believe that the big majority of thinking people in the real estate and financial industries will understand the need for the bill and will help to make it work for their own protection . . . These people know that sound, long-range business cannot be built on runaway costs and inflated prices. Such a plan would clearly strike only at the profiteer and the fly-by-night operator."

So far official spokesmen for realtors and housebuilders had failed to corroborate Bowles' confidence. Their campaign against the bill increased in violence. But support from other quarters was rolling up impressively. President Truman himself had asked Congress to vote house price ceilings. After a good deal of back-and-filling, Reconversion Director John W. Snyder had finally said decisively: "Such authority is essential if we are to



### Bowles no longer fights alone

avert further skyrocketing of home prices."

It was easy to gauge rising public indignation in the substantial and increasing Congressional backing for a price control measure which had not even been tried during the war, and the merit of which many Building men questioned.

### TREND

#### City and state building plans shrink as bids climb ahead of estimates.

States and cities blinked at climbing building costs, gasped at current bids. The month brought many a sign that Building's state and municipal customers will

wait for costs to level off—or pare badly needed construction. Among them:

Michigan, planning a veterans' clinic at Ann Arbor, got only one contractor's bid—\$190,000 above the estimated cost of \$250,000. The state thought it might build the clinic itself, hoping to save by its exemption from many tax items.

Detroit said its 1946-47 school building program would have to be cut in half. Bids for its first school job showed up to 90 per cent higher than Board of Education estimates. Said building superintendent George Schultz: "Contractors can't get workmen and certain necessary material, so they set their competitive bids high enough to protect themselves from slow production." Detroit's first slum clearance project also stalled; the Detroit Housing Commission could find only one builder who would risk a bid.

Maryland found that bids on three state hospitals were 100 per cent above 1940 estimates, expected that prices would go higher still by spring. In Baltimore, architects met with state school officials to look for a way to hurdle climbing costs. One superintendent said that low bids on a small county school building would put cubic foot costs at 73½ cents compared to 29 cents in 1937. One result, architect Rhee Burket lamented, may be "sad educational structures."

## MATERIAL

### OUTLOOK

#### Supply slowly improving for bricks, gypsum products, soil pipe.

"For three months," Governor Thomas E. Dewey said, "the entire majesty of New York State and all the resources at its command proved unable to find a toilet seat." Almost everybody was having similar troubles. The outlook:

**Steel.** Threat of a mid-January strike that would shut down 800 steel producers, fabricators and aluminum processors hung heavily over Building, like every other industry.

**Lumber.** Strikes, forest fires in the West, price ceiling unrest continued to retard production. Stocks are now at the lowest recorded level—6 billion board feet, about one-third the prewar level. Lumber available for residential and farm construction and general building repair in 1946 will, however, be double last year's supply. Total amount expected to pass through retail yards (main source of direct supply) is estimated at 14 billion board feet. The worst pinch will be in early spring. Reason: limitations of dry kiln capacity and slowness of air seasoning in the winter months offer little prospect for building up retail stocks of seasoned lumber in preparation for the spring building upswing.

**Plywood.** Production of softwood plywood

is dropping because of labor difficulties although gains are reported in warehouse inventories. Military cut-backs in hardwood plywood have released substantial portions of stock sizes out of current production for warehouse distribution. Big surplus sales were also appearing: RFC offered 1,250,000 sq. ft. of aircraft plywood in Minnesota last month. Like almost every other producer, plywood manufacturers sought ceiling price increases. Complained U. S. Plywood: "In the case of fir plywood, both labor and logs have advanced approximately 50 per cent while the OPA prices are only 2 per cent over those prevailing in 1941."

**Brick.** Although the country's 800 brick manufacturers are now producing at only 25 per cent capacity, production is climbing steadily. November production amounted to 265 million brick as against 182 million in June. Said J. Ernest Fender, president of the Structural Clay Products Institute: "If production of clay products continues to increase at the same rate as in the last quarter of 1945, there should be enough brick to supply essential needs, including home building, by early spring." Biggest block is complete lack of inventories; over half of all plants were shut down during the war. Under the 10 per cent price increase recently granted to states East of the Rockies, wages in the industry have been boosted about 12 per

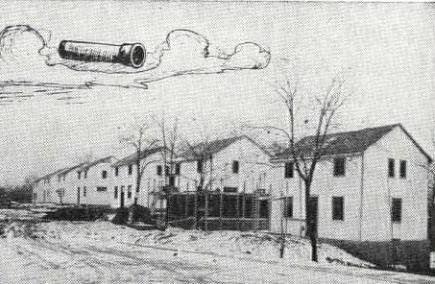
cent. Plants elsewhere still sought increase.

**Cast Iron Soil Pipe.** Production is improving slowly. December production was estimated at 21-22,000 tons. The Civilian Production Administration found "some evidence of return of labor to the industry and of foundry re-openings."

**Vitrified Clay Sewer Pipe.** Producers in Eastern and East Central states won a ceiling price increase of 9.7 per cent. OPA said that this will mean ceiling prices about 19.7 per cent higher than March 1942 levels. Producers in other areas sought similar relief, contending that about half of all plants are shut down because the industry cannot afford to pay wages that will recruit the 800 additional workers it needs. Labor, they said, accounts for 60 per cent of production cost. Right now the industry is producing about 66,666 tons a month. But to meet the requirements of even a minimum construction estimate for 1946 (\$61 billion), production would have to be stepped up to 105,000 tons monthly.

**Gypsum board and lath.** Estimated December shipments amounted to 205 million sq. ft., the highest level recorded for the year. Partly as a result of price ceiling increases, lath shipments have doubled over the last few months. But unfilled orders are increasing sharply, totaling 631 million sq. ft. at last check. Thirty-three gypsum board and lath plants are now operating and the last idle plant is expected to resume operations by the first of January.

**Bathtubs.** With plants shut down by labor difficulties now back in production, out-



**STALLED** for lack of soil pipe is this 44-hour job in Pittsburgh. City won't permit use of terra cotta pipe. Hopping mad, builder John Hack said 15 carloads of cast iron pipe are stockpiled at Indiana, Pa. by Surplus Property Board—which he can't buy.

put for the last quarter of 1945 amounted to 124,000 cast iron tubs. About 10,000 form steel tubs were produced. Said CPA: "Continuation of this rate of production means that requirements for anticipated new construction will be met. However, the rate will have to be increased to meet the probable large replacement demand."

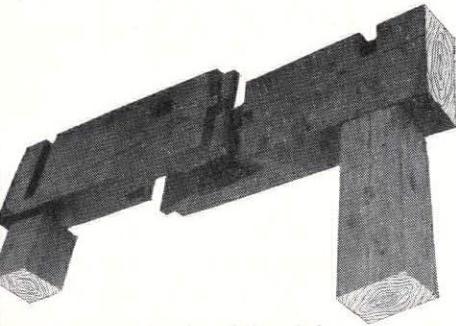
**Oil Burners.** Labor lack, shortage of iron castings, and scarcity of valves caused by a strike in midwestern valve factories slowed production. Big producers estimated that the entire 1946 output will be required to fill orders now on hand.

**Equipment.** As the United Electrical Radio & Machine Workers of America threatened to strike for a \$2 daily wage increase, electrical equipment delays were ahead.

## REFAB TARGET

## Antonin Raymond duplicates Japanese workers houses for U. S. Army.

New York architect Antonin Raymond, who lived 18 years in Japan, knows almost as much about Japanese building as the Japanese themselves. Early in 1943 Raymond got a strange order from the Standard Oil Development Co. of Elizabeth, N. J. Standard Oil wanted Raymond to design replicas of Japanese workers' housing, life-size and exact—right down to the 3 x 6 floor mats and the rice paper sliding screens. Moreover, the 24 houses were to be designed for factory prefabrication and rapid site assembly, and were to be accompanied by a big stockpile of extra structural parts. But the strangest part of the strange order was its single purpose: the



points were mortised and doweled

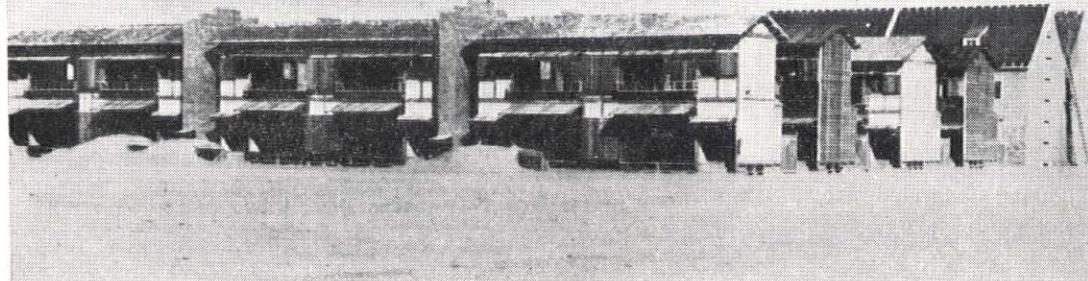
houses were to be burned to the ground immediately after construction.

Just released by Army censors, pictures (see cuts, right) are the only remaining record of one of the war's most meticulous design jobs. As fast as the houses could be erected, U. S. Army bombers, thundering over their desert Utah site, demolished them with incendiary bombs. On the basis of this experiment, directed by the Army's Chemical Warfare Service and by the National Defense Research Committee, the Army chose the incendiary bomb which destroyed 18 square miles of Tokyo last March and which was used by the 20th Air Force to destroy some 160 square miles of property in Japan's industrial cities.

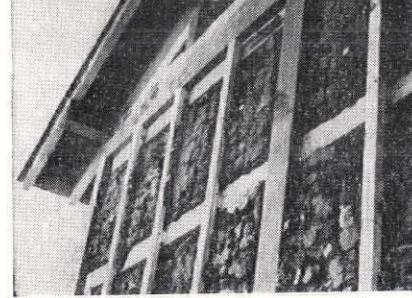
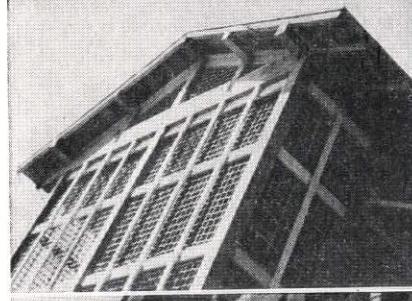
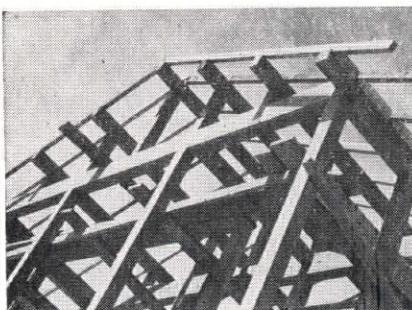
About 60 per cent of the industrial area of Japan's cities is covered with workers' houses, most of them with tile or sheet metal roofs. How fast they could be fired was a prime factor in how fast adjacent war industry could be knocked out.

In New Jersey the Pemberton Lumber & Millwork Co. drew upon plenty of prefab experience to cut the thousands of wooden structural parts.

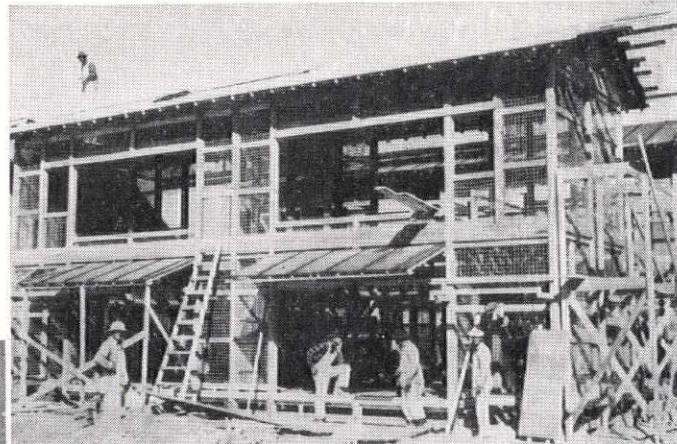
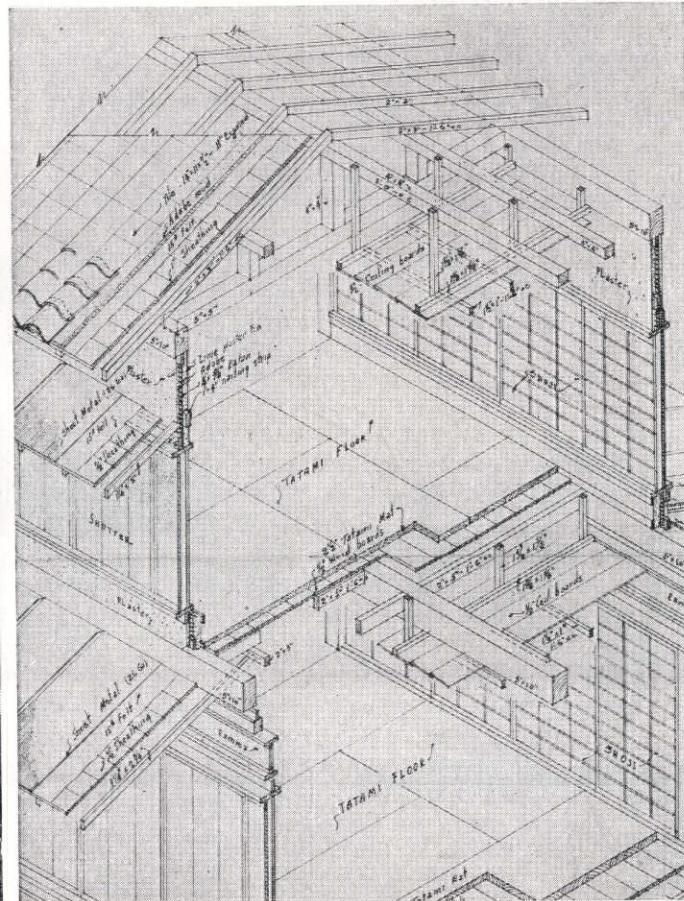
The Union National Co., Youngstown, N. Y. turned over its entire plant for two weeks to produce furniture. The Ford J. Twain Co. of Los Angeles handled site assembly, brought Indians to the job to apply the adobe plaster. Within 67 days after the job was assigned, the prefab Japanese houses were ready for destruction.



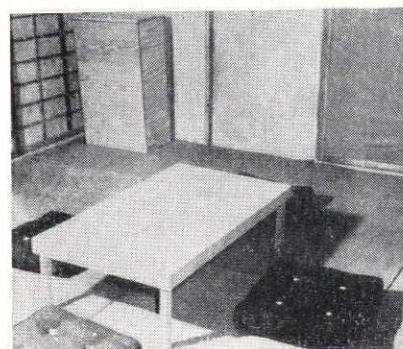
TOKYO WORKERS HOUSING (above view shows typical tile roofs) was duplicated by U. S. prefabs. Because Japanese houses are based on modular system (which in turn is based on the 3 x 6 floor mats) they were easy to adapt to prefab construction. Architect Raymond designed houses from memory.



STRUCTURAL FRAME (above) was reinforced by rattan weave. Adobe was applied (bottom picture) and wall finished with lime plaster coat.



HOUSES were set on square concrete piers. Fire walls (lower right), not used in Japan, were built between every two units to limit bombing effect.



SPARSE FURNITURE of Japanese houses was exactly reproduced. A bomber flew to Hawaii to collect enough floor mats from Japanese community.



## SALES TAX REBUILDING

**Council plan would raze all New York's slums in ten years.**

One-half million New York families live in slums. Hard at work for the last decade, the New York City Housing Authority has managed to provide only 17,040 low-rent dwellings. At this rate, rebuilding New York's slums would take a century.

Last month the Citizens' Housing Council offered New York a simple recipe that would clear all of its slums in the next ten years. The Council recipe, which would also provide 250,000 low-rent dwellings, called for only two financial ingredients:

- Use of the city's 1 per cent sales tax to provide an annual subsidy.
- Issuance of Housing Authority bonds to cover the estimated \$1,675,000,000 capital cost.

Wall Street's Big Four—the underwriting houses who have bought Housing Authority bonds since the first issue—stood ready to purchase the \$1,675,000,000 bond issue that would pay for ridding New York of every slum within a decade. All of these top investment bankers endorsed the plan to earmark the city's sales tax—levied originally for unemployment relief and now going into the general municipal fund—as a subsidy which, together with operating proceeds, would retire the entire bond issue in 45 years. This is what they said:

► Frank Morse, partner, Lehman Bros. (who would take a major share of the issue): "It is a plan that is practical financially and economically. By such a plan you could rebuild the city of New York; you certainly could do the job for

250,000 dwelling units. Building them for \$6,700 per unit at a total cost of \$1,675,000,000 at 2 per cent would cost only \$25 million a year. I'm for it 100 per cent. Maybe I'm a fanatic on slum clearance, but I think the results from a sociologic standpoint could be staggering. It would save much more than its cost in lowered government expenses. We better get started soon."

► Robert Veit, partner, Shields & Co.: "We favor slum clearance and low-rent housing. I think the plan is sound enough. It could be very easily handled from an underwriting standpoint. The real trouble would be getting people to continue to pay the sales tax, which has always met with resistance. But there is probably no way we could accomplish slum clearance in New York except by some special tax."

Dave Robbins



Backer Frank Morse

► William H. M. Fenn, partner, Phelps-Fenn: "We are highly in sympathy with the general principles outlined. We believe it is feasible and would be interested in financing the bonds."

► T. Henry Boyd, vice-president, Blyth & Co.: "We endorse the housing program and we're for seeing it carried out. We're sold on low-rent housing. We think it a very feasible plan. It's sound; it can be financed."

The Council's plan, as worked out in detail by Charles Abrams, former counsel to the New York City Housing Authority, would do more than supply low-rent housing. It would also, by large-scale land acquisition, offer many sites to private enterprise at a price that would make private development feasible. By its wholesale attack, it would mean an opportunity to link the city's big public works program into the job of clearing slum areas.

Abrams figured that the city subsidy would provide about 250,000 low-rent dwelling units and assist in acquiring enough land for another 200,000 units, to be provided by private enterprise and by state and federal aid. Some, he conceded, might object to the sales tax as an unequal burden. "But the New York tax exempts most necessities and therefore does not burden the underprivileged to the extent that other general sales taxes do."

With support promised from Mayor William O'Dwyer, with the state legislature scheduled to consider the matter next month, many a New Yorker, hopeful for the first time of seeing the end of slums, echoed Frank Morse: "We better get started soon."

## DEATH AND TAXES

**Vanderbilt and McCormick mansions bow out to make way for new building.**

Although new building waited, many a U. S. city had already begun to change its face. Last month three imposing monuments of 19th century city building fell to the wreckers.

Cleveland lost its first example of steel-frame construction, the 8-story Hickox building, by whose red brick clock-tower Clevelanders had set watches since 1890.

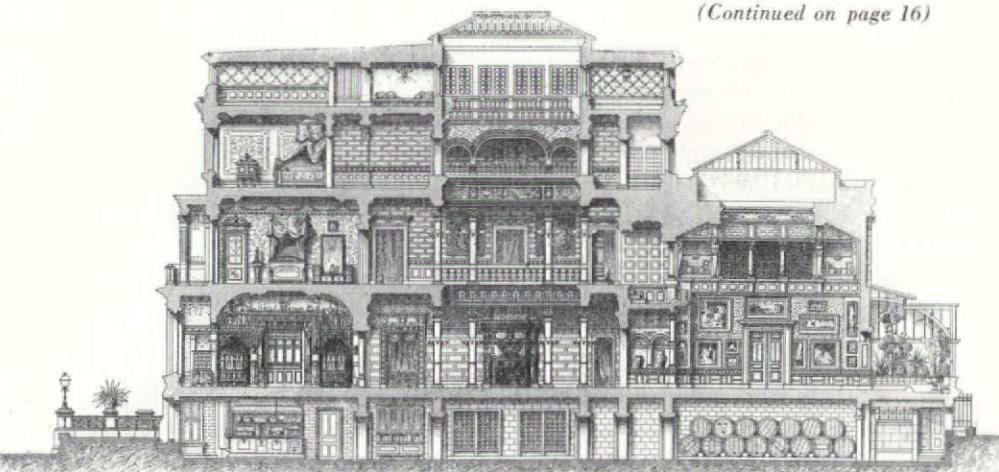
In Chicago, reaper king Cyrus McCormick's somber, mansard-roofed mansion made way for a department store. Five years (1874-1879) in the building, the \$7 million residence was the masterpiece of French architect Adolph Cudell, who came to Chicago just after the Great Fire.

Death warrant for the McCormick brownstone came from power-house Chicago realtor Arthur Rubloff, who also acquired the 70,000 sq. ft. downtown site where Greyhound will build what it thinks will be the world's largest bus station.

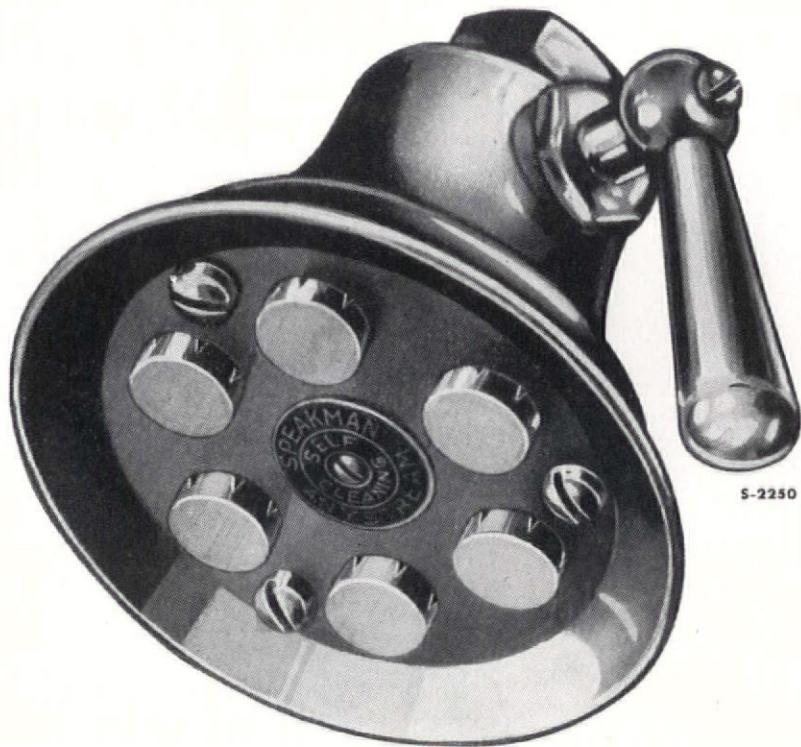
In New York, the passing of the Vanderbilt house (to be replaced by an office and store building) marked the end of a famous Vanderbilt-led battle, fought to stop the steady march of retailers up Fifth Avenue. In the 1900's the transformation of America's greatest residential street into a retail center raised a storm of opposition. Benjamin Altman, who elevated an east side counter trade to a major business, erected the first of the big department stores in 1906. Its store-front, which until recently did not even bear its owner's name, was decorously hidden back of a Florentine facade. Lord and Taylor's was the first frankly commercial building on Fifth Avenue.

The Vanderbilt mansion succumbed as much to taxes as to the steady uptown push of commercial and retail building (recent pushers: Lord & Taylor's and Best & Co., both leaving downtown Avenue locations to build in blocks adjoining the Vanderbilt site). Mrs. Cornelius Vanderbilt paid \$197 in taxes for every night of ownership—whether she slept there or not.

(Continued on page 16)



**VANDERBILT HOUSE** (shown in section in this 1880 engraving) goes to wreckers this month. Pictures scooped out several rooms for movie sets. The Metropolitan Museum bought the famous Malachite urn. One lucky bidder got the two bronze doors, \$25,000 copies of Ghiberti's doors for the Baptistry in Florence, for \$60, plans to install them in his New Jersey house.



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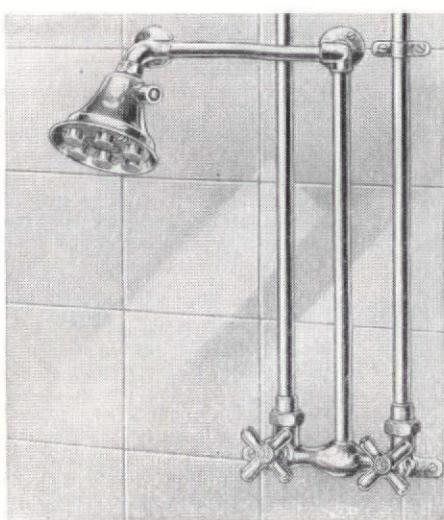
**NEEDLEPOINT SPRAY** for

*stimulation*...



**or FLOOD SPRAY** for a *no-splash* *rinse*. No wonder it's

**the choice of architects for installations calling for the latest refinements.**



Speakman makes a wide variety of showers and shower heads to meet different requirements. Shown here is the Speakman Commander Exposed Two-Valve Shower (S-1160). The Anystream Shower Head shown is the school and institution type, equipped with the lock-shield control, operated with a special key. A lock-screw prevents malicious removal.

Like all Speakman plumbing fixtures, the Anystream Shower Head is rugged in construction. In the FLOOD position, the Anystream is self-cleaning thus eliminating a major source of trouble and maintenance expense. With all Speakman Showers and Fixtures, repairs may be made quickly and inexpensively, when—after long service—normal wear takes place.

Speakman Showers and Fixtures are distributed nationally through plumbing supply dealers and plumbing contractors.

# SPEAKMAN

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SPEAKMAN COMPANY, WILMINGTON 99, DELAWARE

# DESIGN POSSIBILITIES FOR COMMERCIAL



**In Store Design** the tendency seems to be toward "opening up" the front . . . employing large transparent areas to permit freer vision from the sidewalk into the store interior. This, in effect, makes the interior of the store an integral part of the store front display. Pittsburgh Polished Plate Glass, Carrara Structural Glass and other Pittsburgh Products are ideally suited for use by the architect in creating store fronts of this type.

Architect: Albert Anis.

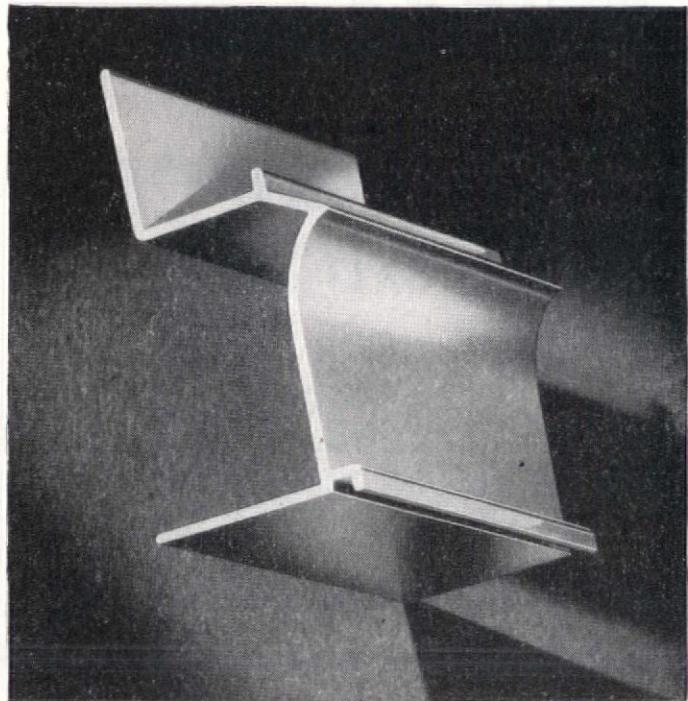
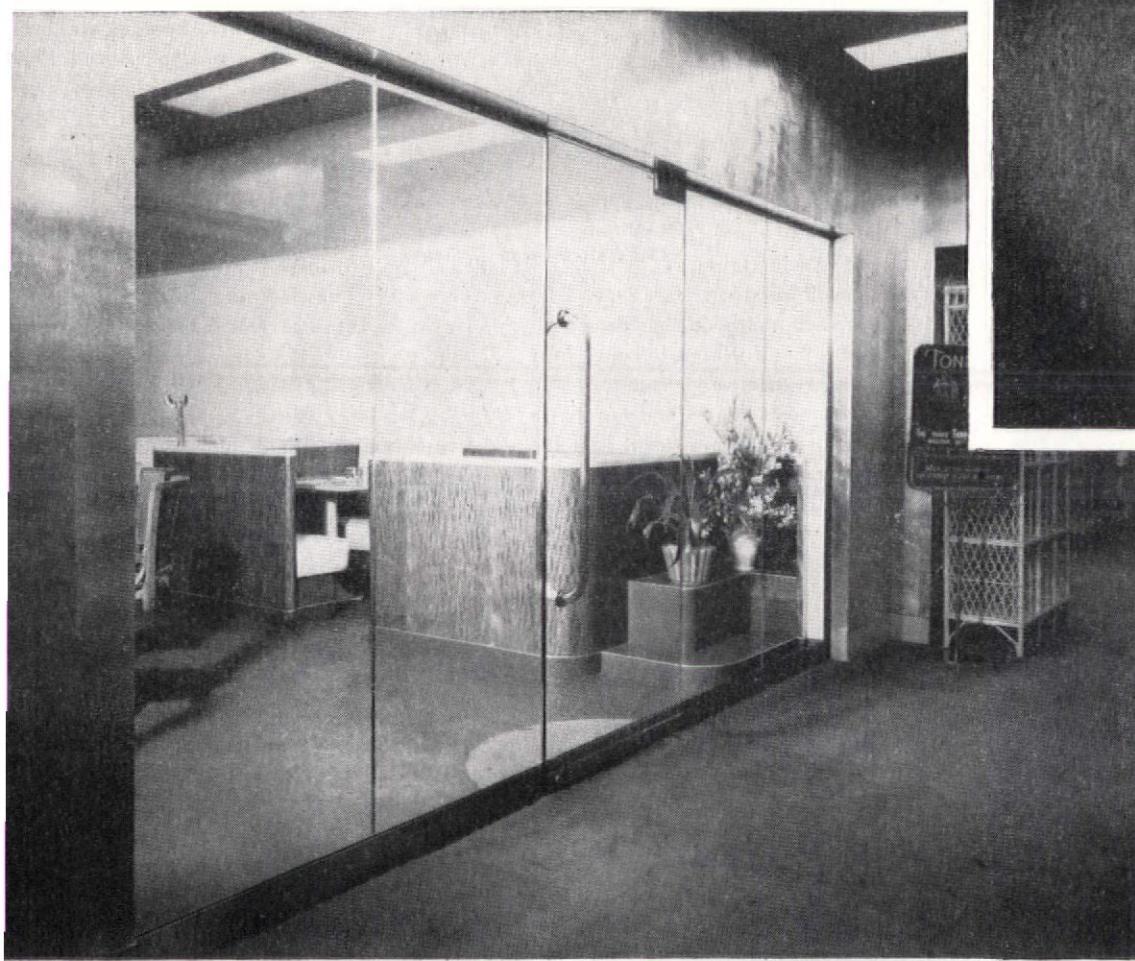
**Mirrors Offer** the architect almost unlimited design possibilities. In bars, restaurants, and lounges they add to gaiety—give new sparkle and beauty. In stores and display rooms, they reflect the merchandise—create an effective atmosphere of spaciousness and luxury. Pittsburgh Mirrors are available made from blue, green, flesh tinted, or regular Plate Glass with silver, gold, or gunmetal backings.

Architect: Frank Hope.

**BUILDINGS with-**



# Glass



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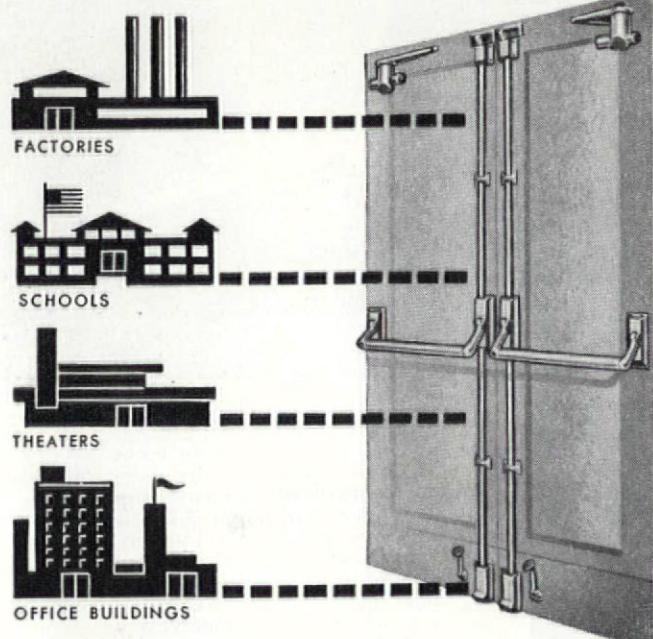
City..... State.....

# HEAVY TRAFFIC



calls for

## MONARCH PANIC EXIT DEVICES



The use of Monarch panic exit hardware is not confined to emergency exits. Today, this practical type of door hardware is being used wherever there is heavy traffic through a doorway.

In factories, schools, theaters, office buildings, department stores, restaurants, and hotels, Monarch Panic Exit Hardware provides swift, smooth door operation.

Monarch offers a series of quality panic exit devices, both mortise and rim types, in a variety of styles for a wide range of applications. Write today for details.

*Monarch—long recognized for quality builders finish hardware—is now a division of Clayton & Lambert Mfg. Co.*

**CLAYTON & LAMBERT MFG. CO.**  
Monarch Hardware Division  
2525 Hart Ave. • Detroit 14, Mich.

### GOOD NEIGHBORS

**California judge knocks out race restrictive covenant as unconstitutional.**

One big question which many a city will soon have to face got a decisive answer in a Los Angeles courtroom last month. Superior Judge Thurmond Clarke decided that 57 of the city's Negro families may keep the homes they have bought in a race-restricted neighborhood.

Moving slowly into old but still gracious Colonial houses in once fashionable West Adams Heights, well-to-do Negroes (among them: movie actresses Louise Beavers, Hattie McDaniel, Ethel Waters) had created what many a property owner fears—the "mixed" neighborhood. But most "Sugar Hill" property owners, glimpsing the spruce lawns, the careful maintenance of their new neighbors, soon lost their fear. Only a few protested the neighborhood change. Finally the protesting handful went to court, brandishing a race restrictive covenant.

Judge Thurmond Clarke's decision was not the first to deny enforcement of a race restrictive covenant. But it was the first in the U. S. to state clearly why such covenants cannot be recognized as legal: "It is time that members of the Negro race are accorded, without reservations or evasions, the full rights guaranteed them under the 14th Amendment to the Federal Constitution. Judges have been avoiding the real issue too long."

Drawn like iron bands around bulging Negro neighborhoods in most Northern cities, race restrictive covenants have been tightened by war housing shortage. They have been written to apply to almost all minority groups—one court ruled that two American Indians might be restrained from occupying property covered by a covenant proscribing "persons not of the Caucasian race." But their biggest social cost has been paid by the biggest U. S. minority group: Negro citizens.

Restrictive covenants have bottled Negroes in densely crowded areas, where two out of every three houses are substandard, where competition for living space means high rents, where three or four families must occupy space inadequate for one. Sample: a single Harlem block houses 3,871 persons; at a comparable concentration, the whole U. S. population could be housed in one-half of New York City.

**New Land Covered.** Initiated principally as barriers to Negro expansion into older city

neighborhoods, restrictive covenants have by now spread to cover undeveloped suburban land. Said lawyer Oren Miller who represented most of the defendants in the Sugar Hill case: "No Los Angeles subdivision is opened now without such covenants being written into the original subdivider's deed."

**Market Block.** New building will ease the acute housing shortage for most Americans. But an important sector of Building's market will be blocked by race restrictions on the land available for building. Nor can racially banned buyers take up housing released in older city neighborhoods as home buyers move to the suburbs. Smart real estate brokers have already realized how much restrictive covenants artificially limit the market for older houses. In some cities brokers have made a specialty of opening neighborhoods to Negro buyers.

Ever since the late, crusading President Franklin D. Roosevelt personally bawled out former Federal Housing Administrator Stewart McDonald for reported FHA discrimination against Negro home buyers, this agency has been a major target in the fight against restrictive covenants. Said the National Association for the Advancement of Colored People: "FHA is preventing the federal government from assisting Negro citizens in meeting their housing needs. It does this by demanding as one of the bases of its guarantee the 'protection' of racial restrictive covenants; by insisting upon the extension of these racial covenants into new areas and, with the use of federal funds and power, thereby requiring residential segregation."

Biggest bone of contention is FHA's Underwriting Manual, which says: "If a neighborhood is to retain stability, it is necessary that properties shall continue to be occupied by the same social and racial classes." Thus, while FHA will insure mortgages in all-white or all-Negro neighborhoods, it will not accept mortgages in changing or "buffer" neighborhoods. The Manual also warns valuers that deeds should include "prohibition of the occupancy of properties except by the race for which they are intended."

The N. A. A. C. P. has fought for the last six years for deletion of these and other discriminatory instructions from the FHA Manual. Refusing to budge, FHA has argued that neighborhood stability and mortgage security would be jeopardized. FHA is now re-writing its Manual. Whether it has changed its mind about race restric-



**Ethel Waters keeps her house**

*Here's  
a Lifetime  
1 PIECE ALL-PLASTIC  
TOILET SEAT THAT  
Never Needs  
Refinishing!*

**Provides Greater  
Health Protection and Sanitation**  
... Cover Encloses Entire Seat  
... Complete Unit is Wear  
and Stain-Proof

**MOULDED** in a solid, one-piece unit from acetate plastic, there is no need to refinish, varnish, repair or otherwise maintain these attractive, durable new "San-DURO" Toilet Seats.

Because of their perfectly smooth, non-porous and non-cracking surface, there is no place for disease germs to lurk and spread. A special feature is the design of the cover, which encloses the entire seat when closed.

Plastic "San-DURO" Toilet Seats are available for regular or elongated toilet bowls, and are made in white, ivory, black, and brown.

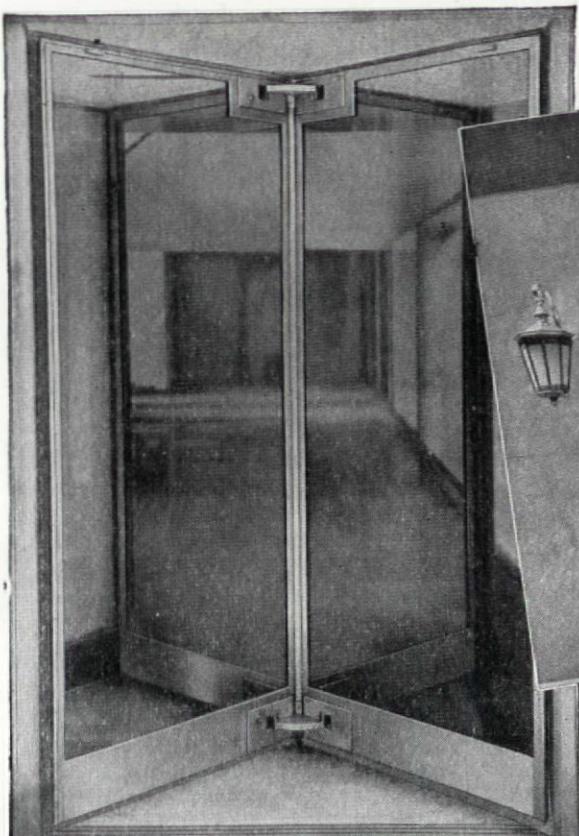
**SEE YOUR JOBBER** — or write direct for complete information and prices.



**ECLIPSE MOULDED PRODUCTS COMPANY**

Plastic Div. of General American Transportation Corp.  
5152 N. 32ND STREET, MILWAUKEE 9, WISCONSIN

MANUFACTURERS OF SAN-DURO PLASTIC PRODUCTS AND PRODUCERS OF PLASTIC ITEMS CUSTOM-MOULDED



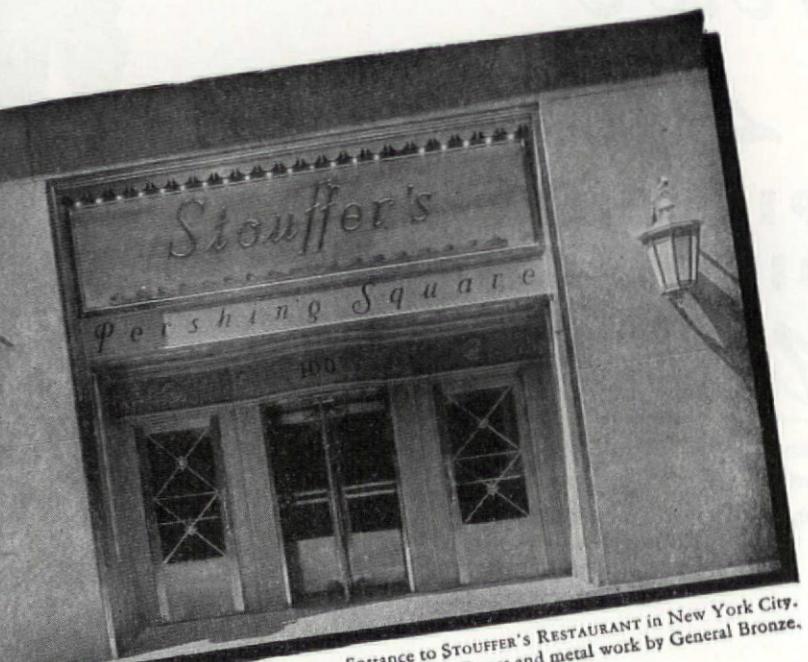
GB REVOLVING DOORS AT ROCKEFELLER CENTER

More than 60 GB revolving doors have been installed to date in the beautiful buildings of Rockefeller Center.



U. S. POST OFFICE AT PHILADELPHIA, PA.

Revolving doors and metal work by  
General Bronze.



Entrance to STOUFFER'S RESTAURANT in New York City.  
Doors and metal work by General Bronze.

## GB ALL METAL REVOLVING DOORS

GB revolving doors are a worthy addition to your finest buildings. These handsome, easy-operating doors embody features developed in thirty-five years' experience in fabricating non-ferrous metal products for the building industry. They are engineered to meet modern requirements and can be detailed to harmonize with the architectural treatment of the entrance.

GB revolving doors have been specified by many of the country's foremost architects for their finest buildings. Hundreds of installations in notable buildings all over the United States are constant reminders of their excellence. As you design new structures or the remodeling of old ones plan to use GB revolving doors. Write today for our catalog or consult Sweet's.

GENERAL BRONZE  
CORPORATION

34-19 TENTH STREET

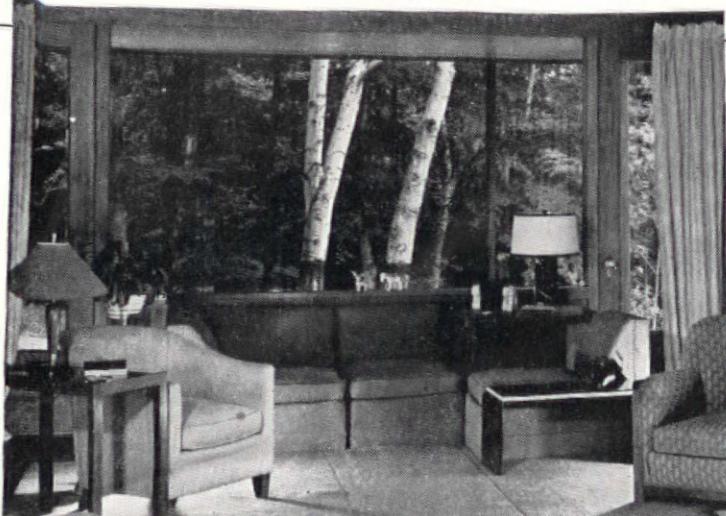
LONG ISLAND CITY 1, N. Y.



SIX CONSECUTIVE ARMY-NAVY "E" AWARDS

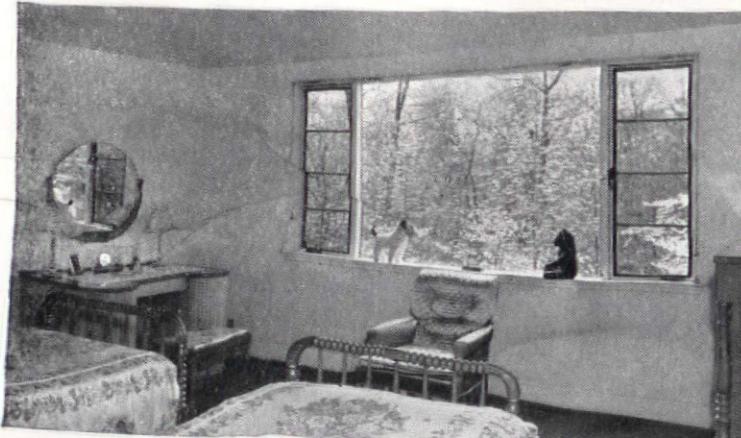
# *Insulated Picture Windows*

## FOR OUTDOOR BEAUTY PLUS INDOOR COMFORT



*Picture Windows frame the loveliness of the outdoors for indoor enjoyment.*

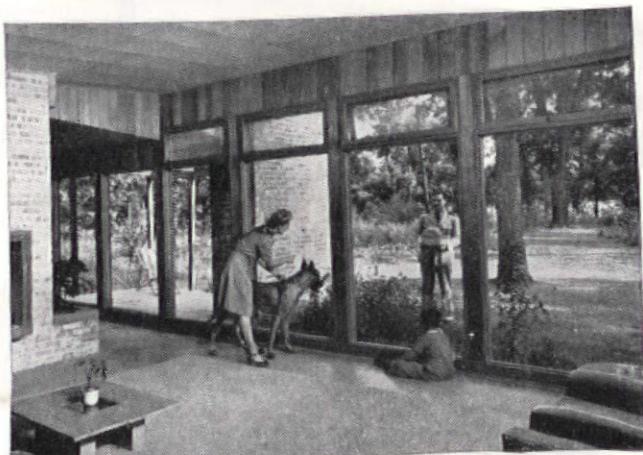
ARCHITECT: R. Franklin Outcalt, Cleveland



*Picture Windows are an effective beauty treatment for almost any room in the house. In this bedroom they bring in the natural charm of the outdoors.*

ARCHITECT: John Franklin, Pittsburgh

*Thermopane\**, the L·O·F multiple-pane unit, provides a thoroughly effective means of insulating Picture Windows. It enables an architect to provide the benefits of larger windows—whatever the climate. There's never any extra sash to put up or take down, for *Thermopane* is "built-in" insulation. It fits into a modified sash like an ordinary pane of glass. For full information, write for the free *Thermopane* booklet and data sheets by Don Graf, Libbey·Owens·Ford Glass Company, 1616 Nicholas Building, Toledo 3, Ohio.



*This window wall provides a sweeping view of the garden, creating a pleasant feeling of greater spaciousness. There's no sacrifice of comfort or heating economy, for this glass wall is Thermopane.*

ARCHITECT: George Fred Keck, Chicago

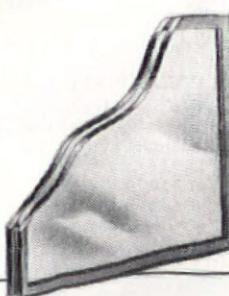
The *Thermopane* Unit . . . two or more panes of glass with dehydrated air hermetically sealed between them. Only two surfaces need to be cleaned. *Thermopane* stays in all year. Available in Canada.



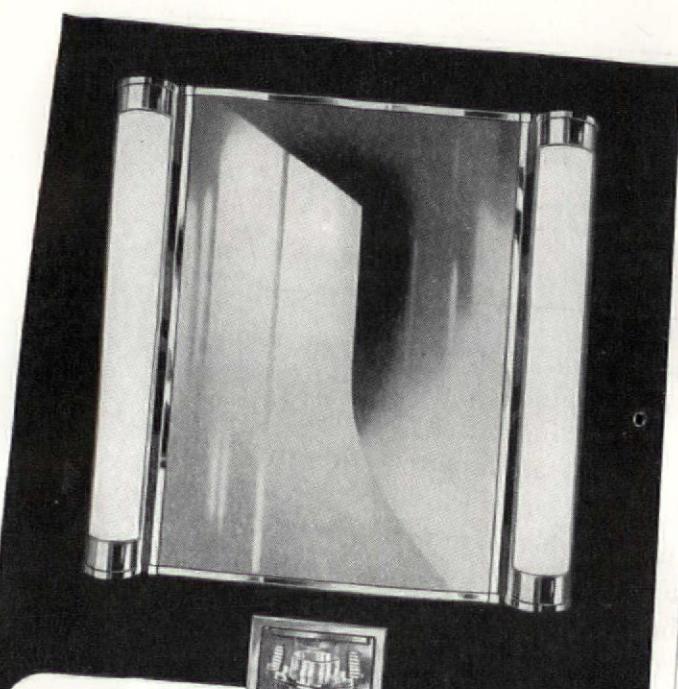
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**LIBBEY·OWENS·FORD**  
*a Great Name in GLASS*



## MONTH IN BUILDING: NEWS



*Look to*  
**HALL-MACK**  
TRADEMARK REGISTERED

FOR THE NEWEST AND SMARTEST  
 IN BATHROOM ACCESSORIES  
 AND MEDICINE CABINETS

Production has started. With expanded facilities, we are making every effort to catch up with the demand. You'll find quality HALL-MACK accessories and cabinets are worth waiting for because you can count on them to please your most discriminating customers. Distributed through plumbing, tile and hardware dealers everywhere.

ILLUSTRATED ABOVE:

Medicine Cabinet FL-P1826 has a seamless porcelain on steel interior, a half pillar of fluorescent light at each side. Mirror door and light fixtures are trimmed with brass beautifully chromium plated. Concealed Lavatory Unit No. 338 holds soap, tumbler and toothbrushes on a revolving panel which conceals these utilities when not in use. Made of brass, chromium plated.

**HALL-MACK COMPANY**

(FORMERLY HALLENSCHIED & McDONALD)

1344 WEST WASHINGTON BLVD., LOS ANGELES 7, CALIF.

tions in view of Sugar Hill and a few other court-approved examples of mixed but stable neighborhoods remains to be seen.

**Door to Race Strife?** Those who advocate race restrictive covenants advance two major reasons: (1) appearance of a minority group in a neighborhood means property deterioration and general decline of values; or (2) mixed neighborhoods precipitate racial strife. There is much evidence against both these arguments.

FHA itself has said: "On the basis of credit analysis we consider Negro mortgagors as good or better risk than white mortgagors." Negro spokesmen have pointed out that restrictions on type of occupancy, requiring building owners not to sell or lease except to single families, would be a far more effective check on property deterioration. The National Association of Real Estate Boards has collected opinions of its members, all giving Negro owners and renters a good risk-rating.

Do mixed neighborhoods open a door to racial strife? Public housing experience as well as countless city neighborhoods have demonstrated that many kinds of neighbors can live happily together. The Detroit riots of 1943 supplied dramatic evidence: rioting occurred in sections where white and Negro citizens faced each other across a color line, but not in sections where the two groups lived side by side.

**Violation of Public Policy.** Race restrictive covenants have no deep root in U. S. public policy. They began to occur only after the Supreme Court ruled in 1917 that city ordinances restricting residential areas according to racial groups are unconstitutional. With zoning segregation knocked out, property owners began to insert race restrictions in property deeds and to band together in covenant agreements. These have been upheld by a majority of state and municipal court rulings. So far the Supreme Court has ducked the question of race restrictive covenants, having refused permission to hear several such cases.

While the U. S. groped for its own solution to this painful but imperative question, a Canadian justice wrote a new chapter in the body of law regulating real estate transfers. Invalidating a deed restriction barring property transfer to Jewish citizens, Toronto Judge Mackay ruled it violated public policy. To define public policy, Judge Mackay drew, probably for the first time in civil jurisprudence, upon the San Francisco charter for precedent. He quoted:

*We, the peoples of the United Nations  
 Determined to save succeeding generations from the scourge of war, which twice*

*in our lifetime has brought untold sorrow to mankind, and*

*To reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small . . . and for these ends*

*To practice tolerance and live together in peace with one another as good neighbors . . .*

## LABOR

### DOOR SHUT TO APPRENTICES

**Permanent shortage of skilled tradesmen looms as Building's next big block.**

Materials shortage was plain to everybody. But not so plain was labor lack, already looming frighteningly as Building's next big barrier. Depleted by the building shutdown of depression years and by the wartime drift into other trades, the ranks of skilled building workmen are at a dangerous low.

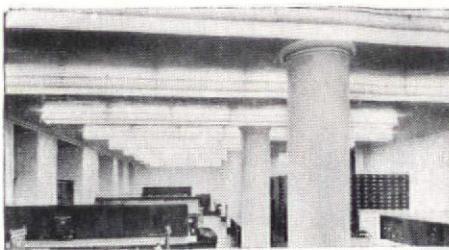
The worst part of building's labor shortage is that it may be a continuing—even a permanent problem. Skilled building tradesmen are growing older (by 1940 the average age had risen to 43 as against 38 years in 1900) and young men are not coming to take their place. Only a handful of building apprentices are now coming over the country. Fearful as ever of downswings in the building cycle, the unions have made no move to open the door to a new supply of labor.

By 1948 Building will need 1,317,000 skilled tradesmen, the Department of Labor said. Last month only about 431,000 skilled workmen were available for building jobs.

There is not even enough labor to meet this year's disappointing estimate of 400,000 new houses. Only about 215,000 tradesmen are now available for residential work—half the necessary number.

**Housebuilding Organized.** While the worst housing crisis in the nation's history focused attention on labor supply, the unions were in the driver's seat as never before. Although before the war only about 10 per cent of all housebuilding was done by organized labor, the unions made rapid gains during the war. Hazardous Dan Tracy, one-time International Brotherhood of Electrical Workers head and now the Assistant Secretary of Labor: residential building is now 90 per cent organized.

*(Continued on page 24)*



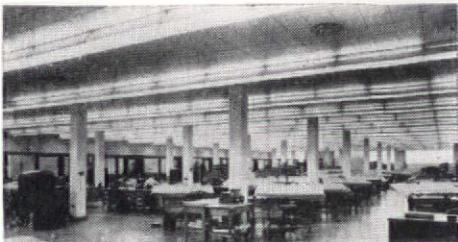
**Minneapolis, Minn.** Sixty-eight Foot-Candles are provided using 2.3 watts/sq. ft. FUTURLITERS are arranged continuously with rows spaced 8'0" apart. Ceiling-height is 11'0". Installation was engineered by Mr. H. F. Strehlow of the Guth Co.



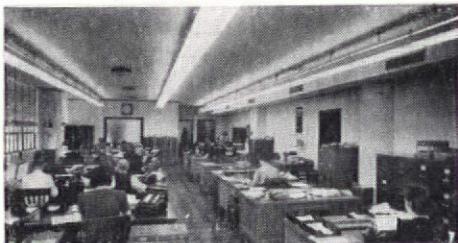
**Warren, O.** This prize-winning installation of FUTURLITERS provides 75 F.C. and uses 2.15 watts/sq. ft. Ceiling-height is 10'0", and rows are on 6'0" centers. Engineered by Mr. W. C. Schultz, Ohio Public Service Co.



**Chicago, Ill.** Illumination at desk-level is 60 F.C. with 2.5 watts/sq. ft. FUTURLITERS are suspended from the 13'6" ceiling to a 9'6" mounting, and rows are on 7'0" spacings. Note the generous ceiling illumination. Engineered by Mr. G. A. Hall of the Guth Co.



**Houston, Tex.** Using 2.9 watts/sq. ft., FUTURLITERS provide 54 F.C. The "45° Positioning" of drafting tables effectively reduces shadows. Ceiling-height is 10'9", and fixture rows are 8'4" apart. Engineered by Mr. H. G. Hrvnat of the Houston Lighting and Power Co.



**St. Louis, Mo.** Fifty Foot-Candles with 3.12 watts/sq. ft. Rows are 8'0" apart. FUTURLITERS are mounted 12" below the 11'0" ceiling. Good lighting provides increased office work, reduces absenteeism and improves employee relations. Engineered by Mr. F. B. Lee, Illum. Eng., General Electric Co.

**WIDESPREAD ACCEPTANCE**

**'Guth**  
**FUTURLITER**  
T. M. REG.  
**INSTALLATIONS**  
tell the  
whole story of this  
Famous Fixture

FUTURLITER—the famous Fluorescent fixture—is used in offices, drafting-rooms, banks, schools, stores, and wherever there is need for Direct-Shielded lighting. FUTURLITERS are modern as tomorrow, they are efficient light producers, and are inexpensive to maintain. Investigate FUTURLITER!

**NOTE:** All photographs used in this advertisement are UNRETOUCHED. Faithful photos are difficult to obtain where shielded-direct lighting is employed. Despite this fact the installations as shown are without the Artist's touch-up.

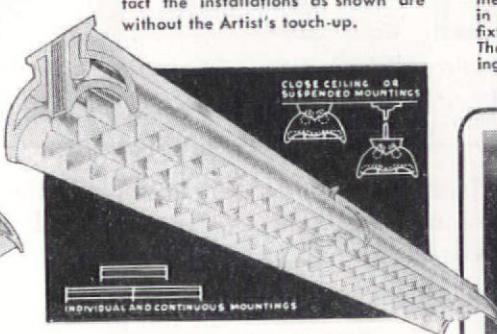


**Decatur, Ill.** Beautifully lighted stationery and photography store, uses FUTURLITERS in 8'0" sections. Ceiling-height is 12'6", and fixture-sections are on 12'0" x 9'0" centers. Illumination is 33 F.C. using 2 watts/sq. ft. Engineered by Mr. H. E. Chamblin, Illinois-Iowa Power Co.



Symbolizing  
the Amazing  
Performance of  
**GUTH FUTURLITER**

**THE EDWIN F. GUTH COMPANY**  
2615 WASHINGTON AVE. • ST. LOUIS 3, MO.  
"Leaders in Lighting Since 1902"



**FUTURLITER DATA**

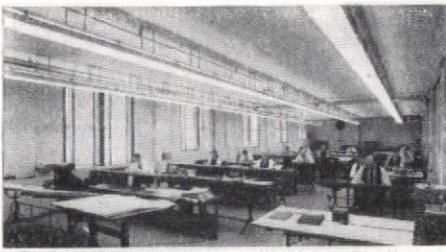
Direct-type luminaire designed to shield lamps at normal seeing angles. All metal, strongly constructed. Finished "300° WHITE". For 2-40 and 3-40 watt F Lamps. Built in 48" sections for individual or continuous-row installations; can be attached directly to ceiling or suspended from same. Available with Conventional or Starterless Ballasts.



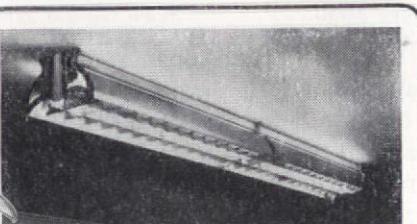
**St. Petersburg, Fla.** Cool fluorescent lighting for warm, beautiful St. Petersburg! There are 75 Foot-Candles on Drafting Tables, and 50 Foot-Candles in office areas, after 1,000 hours operation. Engineered by Mr. W. B. Shenk, Florida Power Corporation.



**Tulsa, Okla.** A prime example of good merchandising illumination (no exposed lamps to distract customers' attention). There are 50 F.C. on the merchandise. Ceiling-height is 14 ft., and spacing between rows is 8'0". Engineered by Mr. A. N. deEspenza of the Lawson Electric Supply Co.

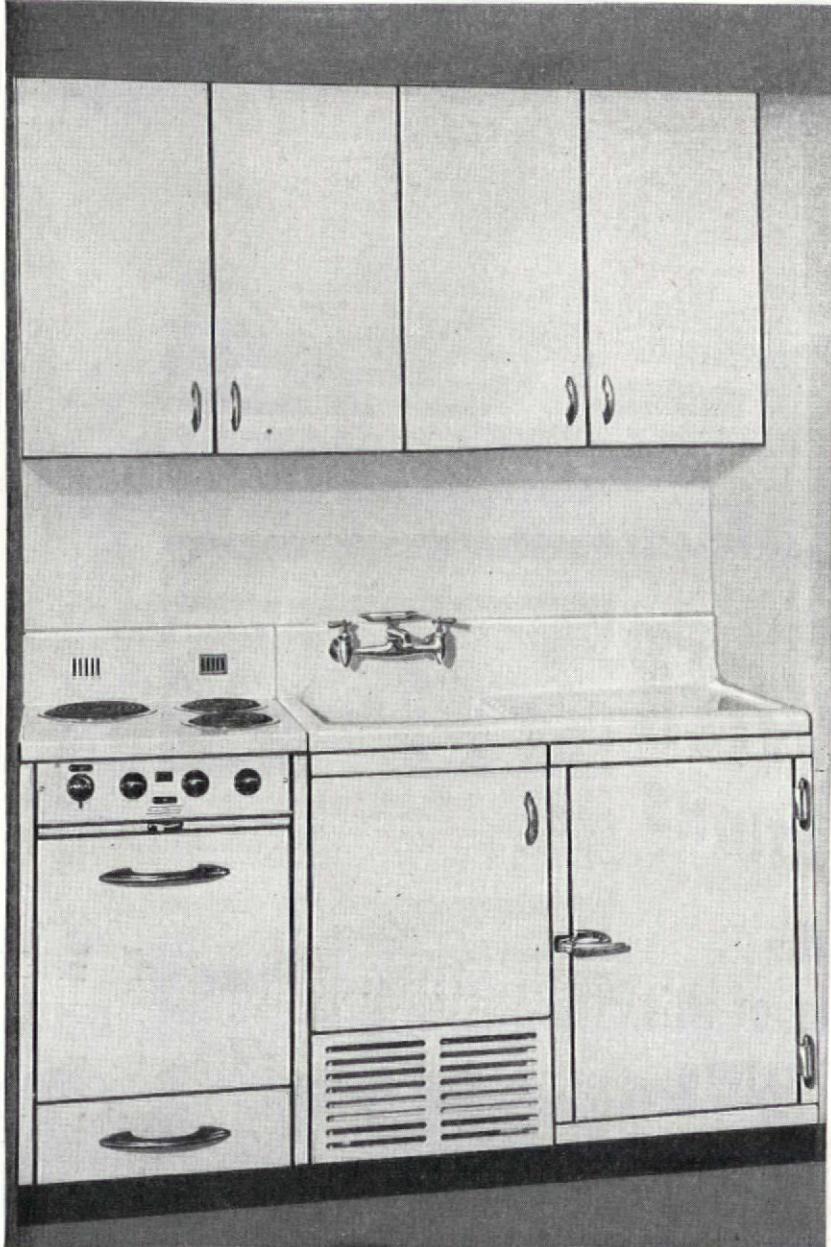


**Dayton, O.** Drafting-room with 65 Foot-Candles on the tables is equipped with FUTURLITERS arranged in rows on 8'0" centers. Ceiling is 11'0" high, and fixtures are dropped to a 9'0" mounting-height. There are 3.1 watts/sq. ft. Engineered by the Lighting Dept., of the Dayton Power & Light Co.



**"Soft-Light" for Ceilings  
with the FUTURLITER**

To relieve harsh shadows and ceiling contrast, a small amount of light is distributed upward. Whether attached to the ceiling or suspended, FUTURLITER provides a pleasant, cheerfully-lighted room.



# Only 5 feet wide but a *real* Kitchen . . . a Murphy Cabranette Kitchen in the permanent beauty of *porcelain on steel!*

Compactly arranged in a space five feet by two feet is a full capacity range (electric or 4-burner gas), with oven and broiler . . . efficient electric refrigerator, deep-bowl sink and a wall cabinet with 15 square feet of storage space.

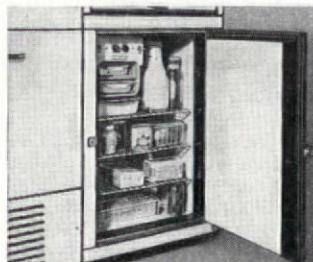
Here are all the required conveniences for kitchen tasks in a permanently beautiful, easy-to-clean Murphy Cabranette Kitchen of porcelain on steel.



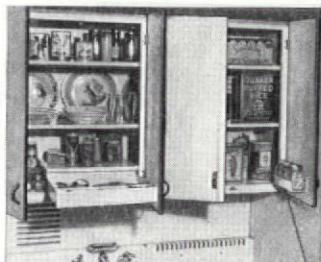
Electric or full-sized 4-burner gas cooking top. Approved design, modern in every detail.



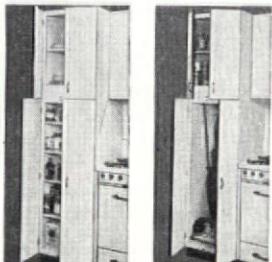
Insulated oven and broiler where they belong . . . down low for safety.



Refrigerator . . . 7.3 square feet of shelf space. 48 ice cubes Sealed-in unit.



Wall cabinet with 15 feet of storage space. Spice jars, cutlery drawer and cutting board.



Utility and Implement Cabinets may be added to Murphy Cabranette Kitchens.

Murphy Cabranette Kitchens are of rugged steel construction with all exposed surfaces of genuine vitreous porcelain. They never require redecorating; upkeep costs are negligible. Available in numerous assemblies adaptable to all types and sizes of apartments.

Murphy Cabranette Kitchens are designed, engineered,

manufactured and guaranteed by a single organization which devotes its full operations to the manufacture of apartment kitchens. Over forty thousands of these remarkable kitchens were installed pre-war. We believe every one of them to be in use today and that owners and users will bear witness to their beauty and efficiency.

*Write for literature and information as to our nearest representative.*

**Space Saving MURPHY CABRANETTE KITCHENS of Porcelain**  
DWYER PRODUCTS CORPORATION

Dept. F146 MICHIGAN CITY, INDIANA

*A new service for architects*

Perfected Indirect  
WENDELIGHTING



LIVING ROOM IN RESIDENCE OF CHARLES R. BLYTH, BURLINGAME, CALIFORNIA. A distinguished harmony of WENDEL's optical lighting for paintings and a soft, indirect illumination emanating from crystal chandelier. The bridge table and flowers also lighted from concealed sources.

WENDELIGHTING is the science and art of perfect illumination. More than two hundred basic systems of lighting, inspired by Rudolf Wendel, are credited to his world-wide organization of designers and engineers. Famous buildings, cultured homes, are now served with beautiful, soft WENDELIGHT . . . from concealed sources. WENDELIGHTING conforms strictly with optical laws and is kind to eyes. It eliminates strong glare and shadow, enhances detail, enriches color and brings effectively into prominence

the architectural design. WENDELIGHTING, built into the room, becomes an integral part of the architecture. The same lighting effects may be obtained by employing portable WENDELIGHTING equipment (modern and classic designs), incorporating Rudolf Wendel patents.

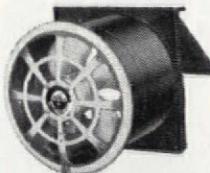
Consult Rudolf Wendel on your lighting problems. Let us plan scientific indirect lighting for your buildings . . . no obligation! Write for catalog C.

RUDOLF WENDEL  
INCORPORATED

NEW YORK: 730 FIFTH AVENUE  
LOS ANGELES: 8615 SUNSET BOULEVARD

LONDON

PARIS



**There are 3 big markets  
for fresh air!**

**For the new home**

**for modernization** and  
**a sensational new model**

**for the renter.**

**Victron Ventilators** pro-  
mote health and comfort, every  
season of the year.

**Victron National advertising**  
is pre-selling the public,  
convincing them that  
"smog" and "smells"   
have no place in any room  
of the modern home.

Get the facts and you'll  
agree, there are "3 big markets"  
 for fresh air!

**Write today.**

MANUFACTURERS OF VICTOR DESK AND PEDESTAL  
FANS—VICTOR VENTILATORS—VICTOR  
PORTABLE IRONERS—VICTOR F.M.P. MOTORS

**VICTOR**  
PRODUCTS



**ELECTRIC**  
INCORPORATED

A check last month showed how organized labor is keeping a tight lid on recruiting apprentices. To date:

► Not a single building trades union has made a move to shorten overlong training periods, ranging from three to six years. On the four-year bricklayer requirement, B. T. Bonnot, Canton, Ohio brick manufacturer, observed: "Less than one in a thousand GIs will be attracted to that sort of a proposition when they start to look for a postwar job."

► Not a single union has seen fit to adjust its traditional journeyman-to-apprentice ratio. Carpenters still train only one apprentice for every ten journeymen; most other trades still limit apprentices to one for every five journeymen.

► Not a single union has taken steps to provide systematic crediting of army and navy experience in building skills. While policies of "welcome to veterans" have been declared, actual crediting of experience is up to local apprentice training committees. Many a navy-trained pipe-fitter or army engineer mason has found that his service-acquired knowledge will entitle him to hurdle no stages of the traditional apprentice course.

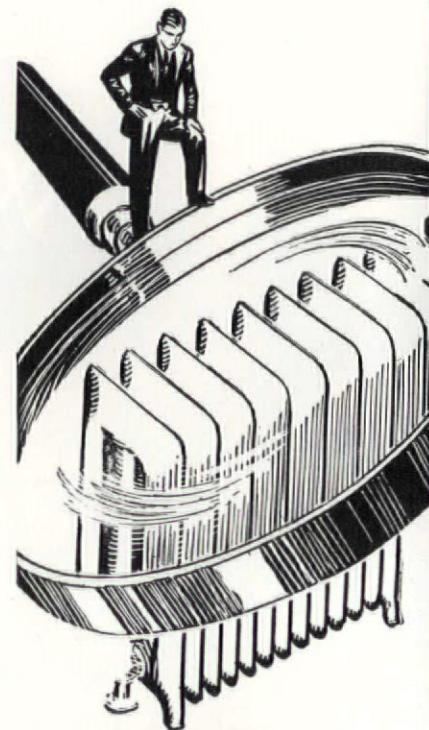
► Few unions have provided for any appreciable pay-increase to apprentices. In New York City, one of the highest cost-of-living centers, bricklayer apprentices still get only \$15.75 a week during their first year. Electrical apprentices do a little better, get about \$19.45 per week. Some help comes from the GI Bill of Rights, which pays veteran apprentices \$50 a month if single and \$75 if married.

**Training Could be Halved.** All building crafts could be taught in half the usually scheduled time, declared Layton S. Hawkins, the U. S. Department of Education's chief of trade and industrial education. Said Hawkins: "The skilled worker has always been afraid of having the trade diluted by newcomers—there is not a doubt in my mind that were this not so we would see how quickly crafts could be taught."

But union officials last month said with one voice that it is impossible to alter training methods in any way. Argued AFL housing economist Boris Shiskin: "You can't introduce a man to all the variations of practical experience by means of a blackboard."

**63,000 Bricklayers Needed.** Brickbats for labor's restrictive training requirements came from the Structural Clay Products Institute. Some 63,000 new brick masons will be needed over the next few years, the Institute said, in addition to the 91,000 the

*(Continued on page 28)*



## Comfort-magnified!

When a heating system provides the correct temperature at the correct time (more steam on coldest days; less steam on mildest days), with a great saving in fuel, and does it automatically—that's comfort, magnified!

The Webster Moderator System of Steam Heating supplies the correct amount of steam to each radiator to agree with exposure and changes in outside weather conditions. It is automatically "Controlled-by-the-Weather".

There are just four control elements in the Webster Moderator System: an Outdoor Thermostat, a Main Steam Control Valve, a Manual Variator and a Pressure Control Cabinet. They assure comfort and economy at all times, under all conditions.

### More Heat with Less Fuel

Seven out of ten large buildings in America (many less than ten years old) can get up to 33 per cent more heat out of the fuel consumed! . . . A book "Performance Facts" gives case studies—before and after figures—on 268 Webster Steam Heating installations. Write for it today. Address Department AF-1.

**WARREN WEBSTER & CO., Camden, N. J.**  
Pioneers of the Vacuum System of Steam Heating  
Representatives in principal Cities : : Est. 1888  
In Canada, Darling Brothers, Limited, Montreal





## Easy to clean... and quiet to walk on!

EASY  
TO  
CLEAN

LONG  
LIFE

RÉSILIENT

TWO PRIME ESSENTIALS of hospital floors are combined in Johns-Manville Asphalt Tile...cleanliness, and elimination of unnecessary noise.

An occasional mopping of the smooth, waterproof surface will keep the floors spotlessly clean and bright-looking...no hard scrubbing needed.

And because J-M Asphalt Tile Flooring is resilient, it deadens the sound of footsteps and wheeled vehicles, helping provide the quiet that patients need.

**These advantages** are easily available at moderate cost. And once the floors are installed, they last for years with little or no maintenance. For Johns-Manville Asphalt Tile is made of asbestos and as-

phalt, two inorganic materials which are practically indestructible.

The units come pre-waxed from the factory...do not originate dust...and, in case of accidental damage, are easily replaced without evidence of patching.

Hundreds of designs and color combinations are available to meet hospital flooring needs—in lobbies, corridors, wards, private rooms, and service areas.

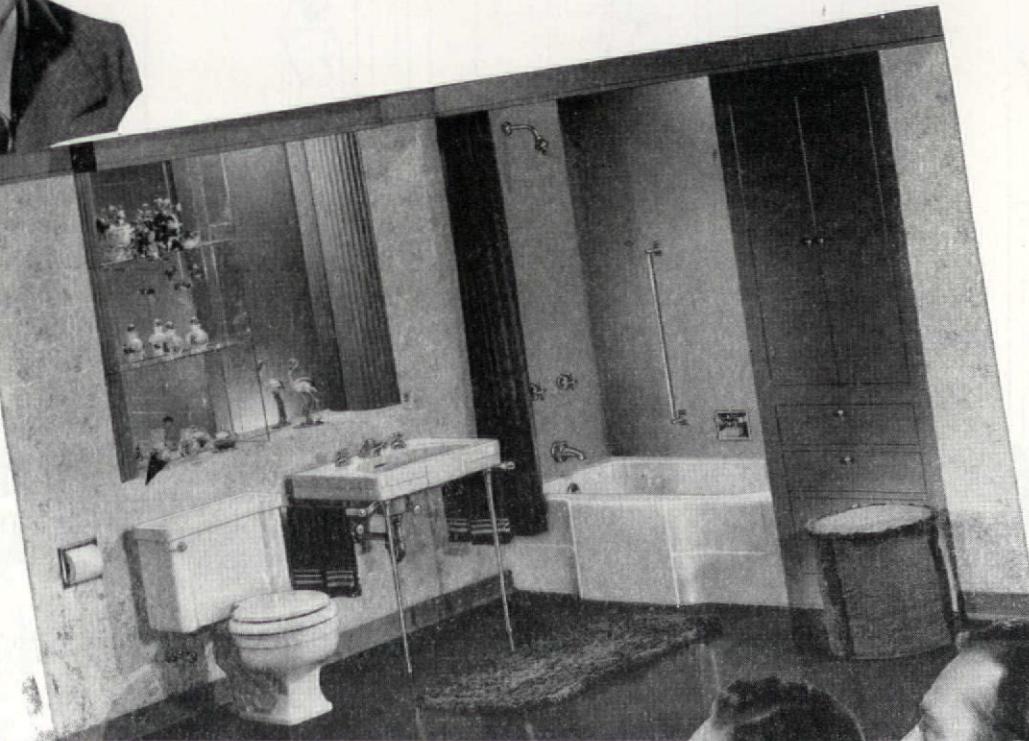
**A colorful new booklet, "Ideas for Decorative Floors,"** shows dozens of attractive designs...gives complete information on the advantages of J-M Asphalt Tile. Send for your copy. Johns-Manville, 22 East 40th Street, New York 16, New York.

JOHNS-MANVILLE  
**JM**  
PRODUCTS

**Johns-Manville** *Asphalt Tile* **FLOORING**



**"The name CRANE on plumbing  
is Convincing Proof of Quality"**



**"We knew the builder believed  
in Quality Construction when  
we saw CRANE PLUMBING"**

Your prospects associate the name Crane with high quality equipment. In the homes you build, Crane will not only inspire confidence, but will give your prospects the assurance of your regard for their lasting comfort and convenience.

But even more than this, the breadth of the Crane lines permits flexibility in your planning and the wide price range enables you to specify Crane plumbing in any type of structure you build.

The new Crane line of quality plumbing has been freshly styled to suit modern taste, and the many advanced engineering features assure greater convenience—more efficient operation.

For example, the newly developed *Dial-eze* trim

permits faucets to open and close at a finger's touch because water pressure has been harnessed to do the manual work of closing.

Crane plants are now producing plumbing to meet your needs, but obviously everyone cannot be supplied at once. Your Crane Branch will gladly work with you in your plans and do everything possible to help provide sanitary equipment at the time you need it.

# CRANE

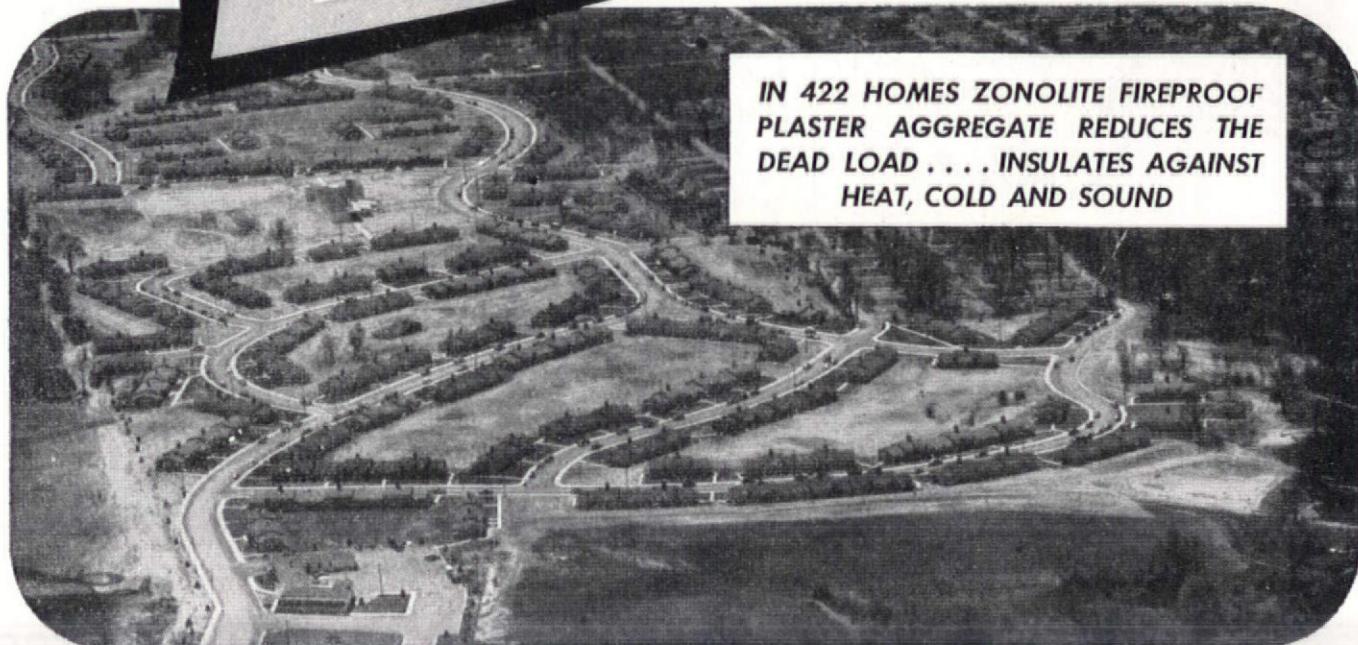
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# ZONOLITE FIREPROOF PLASTER USED IN HUGE HOUSING PROJECT

Charles Noble, Architect, Detroit  
The Esslinger-Misch Co., Contractors, Detroit



IN 422 HOMES ZONOLITE FIREPROOF PLASTER AGGREGATE REDUCES THE DEAD LOAD . . . INSULATES AGAINST HEAT, COLD AND SOUND

## Zonolite Plaster Speeds Construction and Provides Values Found in NO Other Material

In "Pittsfield Village," large Michigan housing project, Zonolite Plaster Aggregate was used throughout. This material provided a lightweight, fireproof plaster of high insulating and sound deadening qualities. The Zonolite plaster was applied over gypsum board lath.

Architects and engineers are interested in the weight saving features of Zonolite Plaster Aggregate. It weighs only 8 pounds per cubic foot as compared to 100 pounds per cubic foot for sand, thus greatly reducing dead load in buildings—as much as five tons in the average house. As it applies faster and easier, it speeds up construction.

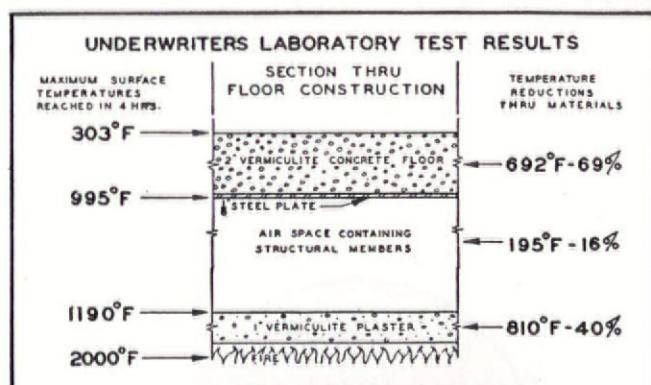
For full details about Zonolite, fill in and mail the coupon.

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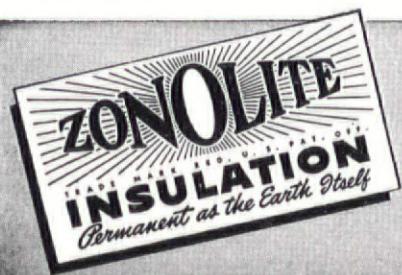
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In recent test by Underwriters' Laboratories, Inc. 1 inch of Vermiculite\* Plaster on metal lath used as protection for steel floor and structural members, received 4-hour fire rating, the highest rating awarded any material. Chart shows results and maximum temperatures reached. This construction is the lightest, least expensive and thinnest fire protection ever to withstand this test.

\*Vermiculite is generic name for Zonolite.



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Gentlemen: Please send me complete details on  Zonolite Plaster,  Acoustical Plastic,  Concrete,  Granular Fill Insulation.

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City..... Zone..... State.....

Please check:  Architect  Engineer  Draftsman  Contractor



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The original Ohio White Finish and its famous twin, Hawk Spread, always satisfy architects, plasterers and dealers who demand top quality finishing lime.

Scientifically processed from rock quarried from the heart of the world's purest deposit of dolomitic limestone, both brands are always fresh, always uniform, always 99½% pure. Unusually high in plasticity, they spread far.

- Remember these brands . . . Make sure that Red Zig Zag Stripes are on every bag of finishing lime you buy.



industry may hope for if all bricklayers in military service take up their trowels again and if no older workmen retire. The trade's present roll-call of 91,000 is no higher than the number employed in building in 1870. A lively black market in bricklayers' wages flourished in a number of cities—notably in Detroit where workers were getting premium pay.

Brick producers said that bricklayer apprentices are now entering training at a trickle of 150 a month. Union locals plan to set an upper limit of 6,000 or 7,000 on apprentices, the producers said. "That's only a drop in the bucket of what



In Britain apprentice crews were building houses; training barriers fell as a 20-month program turned out skilled workers. Six months of class-study precede 14 months of site-work at 85 to 90 per cent of full journeyman rates.

we need—two apprentices for each of our 3,000 counties," one official complained.

In New York, regional Apprentice Training Service director John Gallagher said regretfully: "Apprentice training in this area is two decades behind the times. While apprentices amounting to one-third of the union membership would be necessary merely to maintain current levels, many New York locals have no apprentice training program at all."

Only New York local with more than 7 or 8 apprentices in training is the carpenters' union, which has about 100 training on shop work, plans to move them outside as soon as jobs are available. Charles W. Hanson, president of the New York State Council of the United Brotherhood of Carpenters and Joiners said that many veterans are being taken into the union as apprentices without payment of initiation fees.

**Door Shut to Veterans.** But in Indianapolis, where the carpenters' local could hear at close range the pious resolution of its national executives, a general directive to give credit for service experience went unnoticed. Veterans were not finding the carpenters' door open. C. O. Holmes,

(Continued on page 32)



## Check Exclusive Anchor Features

Anchor Chain Link Fence provides important and exclusive advantages which are found in no other fence.

**Deep-Driven Anchors**, which facilitate erection, hold fence permanently erect and in line, yet permit relocation without waste if enclosed area changes.

**Square Frame Gates**, inseparably butt-welded at corners, amazingly free from sagging and warping.

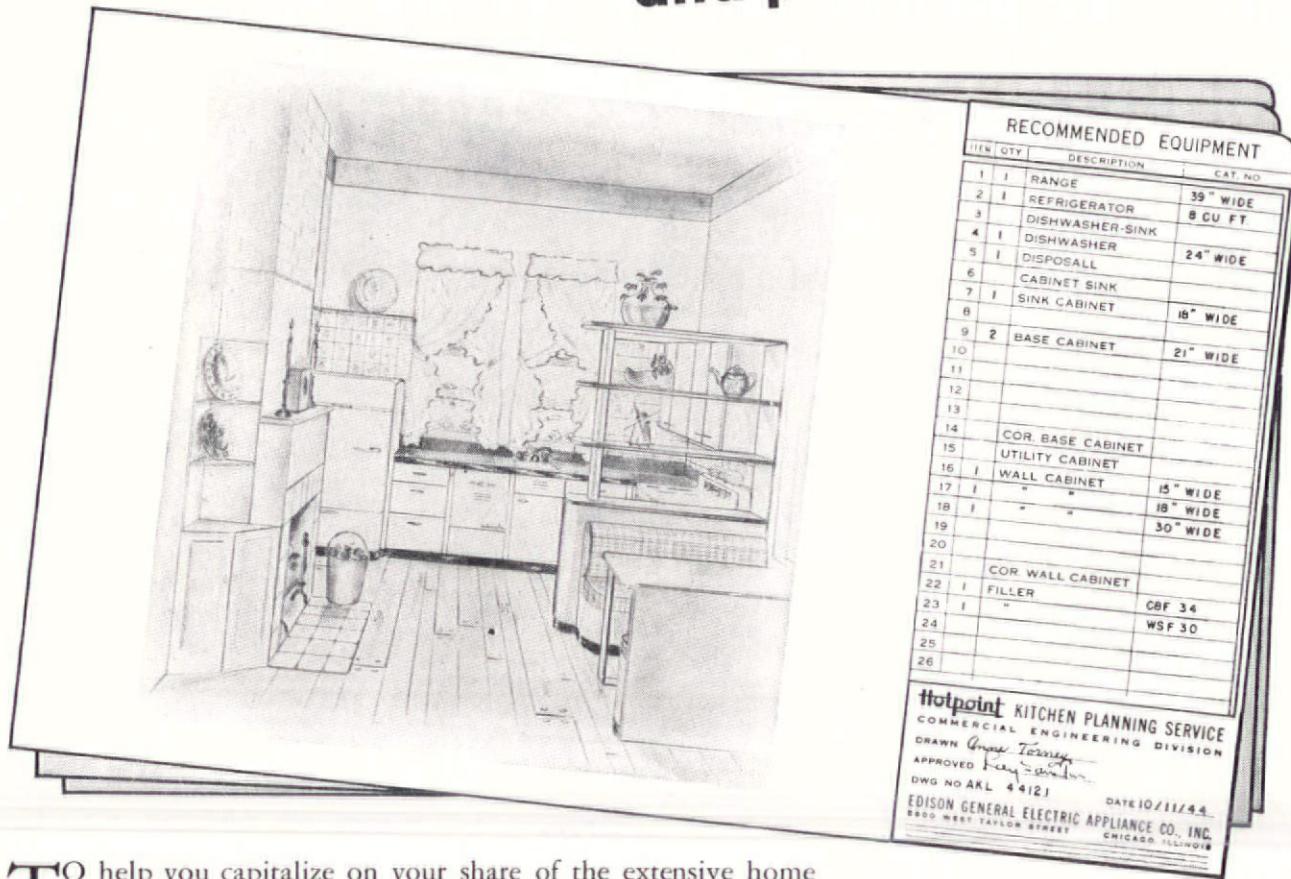
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**U-Bar Line Posts**, which further increase rigidity, strength and durability.

Send for our Book No. 110 for your A. I. A. File No. 14-K. Shows many types and uses . . . pictures prominent installations . . . contains structural diagrams and specification tables for Anchor Chain Link Fence. No obligation. Address: Anchor Post Fence Co., 6635 Eastern Avenue, Baltimore 24, Maryland.

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Nation-wide Sales and Erecting Service

# Everybody wants a modern kitchen... and preferably ELECTRIC!



TO help you capitalize on your share of the extensive home building and modernization that is planned, Hotpoint has prepared a *Portfolio of Personalized Kitchen Plans*. In it you'll find plans for all types and size kitchens, including the bungalow, mansion and farm home, as well as the compact kitchenette. For detailed plans and additional information mail coupon below.

#### Long-term Promotions Have Created Trend to Functional, Electric Kitchens

- Over a million and a half dollars were spent by Hotpoint in national advertising during the war to promote the trend to all-electric kitchens.
- Scores of articles in leading magazines and newspapers have focused attention on the modern kitchen as the No. 1 room in the postwar home.
- Over two million booklets, "Your Next Kitchen" by Hotpoint, have been distributed.
- Leading utility companies and dealers have promoted all-electric kitchens in their communities.

© 1946, Edison General Electric Appliance Co., Inc.

#### Plan kitchens for the 77%

"More than seven out of ten modern homes will cost \$3,000 or over," predicts the United States Chamber of Commerce. That price range means 7 out of 10 builders can afford, and will probably demand, an all-electric kitchen.

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Without obligation, please send me your <i>Portfolio of Hotpoint Personalized Kitchen Plans</i> . This offer available in United States, Territory of Hawaii and Alaska.
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**Hotpoint** ELECTRIC KITCHENS

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# Our 1946 pledge to the Architect will provide...

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 **Better Asphalt Tile**

 **More Customer Satisfaction**

1 Five great new plants now under construction... to be operated by skilled, experienced "flooring engineers"... your assurance of a continuous greater flow of asphalt tile from our doors to the floors of your customers.

2 Together with the Flintkote Company we will continue to pioneer in the development of new and improved products—products that you can recommend as the finest on the market. This research program is another Tile-Tex policy.

3 We will continue in 1946 to build every Tile-Tex product only of the finest materials available, under rigidly controlled manufacturing methods—methods that insure uniform quality and maximum performance.

4 We are proud of our widespread organization of approved Tile-Tex contractors... each and every one a reputable, responsible business firm using only the finest skilled mechanics. And, more important, we insist that they meet our exacting installation standards on every job.

5 We offer you the finest product on the market, but we don't stop there. Our interest in your job continues long after installation. Our maintenance service program insures protection for your client's floor investment through periodical performance check-ups.

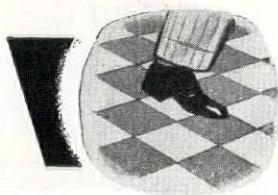
## THE TILE-TEX 1946 PLEDGE

- 1 Adequate Plant Facilities
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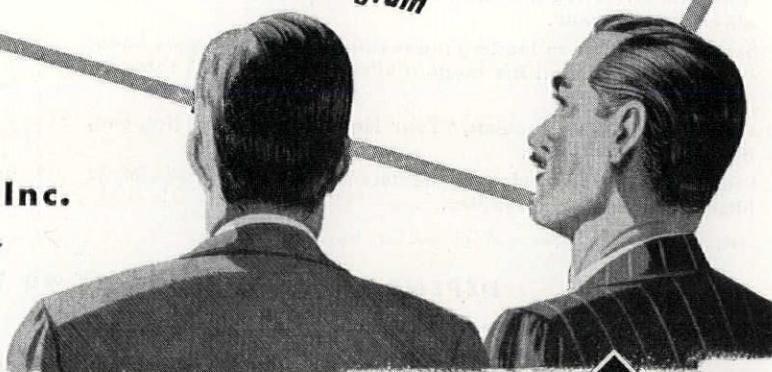
**THE TILE-TEX COMPANY, Inc.**

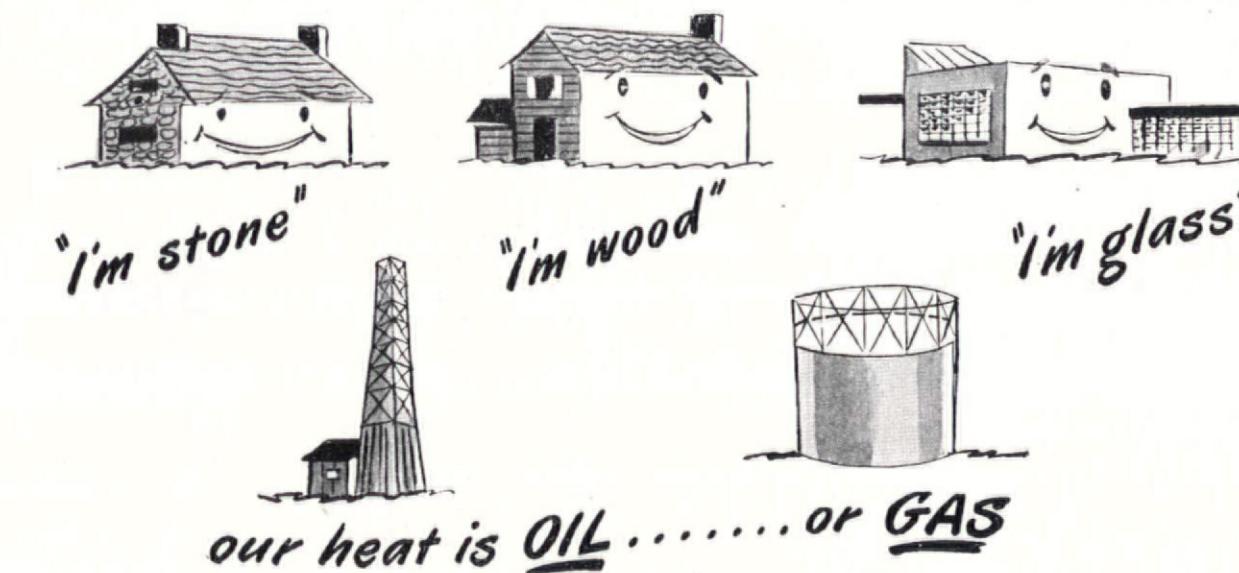
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NO matter which design for living you recommend to your client . . . there's a reliable G-E design for heating to fit into your plans.

Some architects prefer gas for heat. Others favor oil. But in either case . . . for steam, hot water, or conditioned warm air applications . . . more and more leading building designers are specifying G. E. for home heating.

The proven reliability of G-E heating

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See Sweets Catalog for specifications. For price and delivery information you'll find a G-E dealer listed in your Classified Telephone Directory.

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**GENERAL  ELECTRIC**

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Boiler for steam or hot water heating systems



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Now on the production lines . . . new gas ranges by Roper . . . designed for today's modern kitchens . . . with features that are truly "Jewels of Cooking Performance" . . . the result of 60 years experience in building "America's Finest Gas Range."



**ROPER**  
GAS RANGES

GEO. D. ROPER CORPORATION,  
Rockford, Illinois. Offices and  
warehouses in principal distribution  
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executive secretary of the Indianapolis Contractors Association, cracked: "All that was happening was that the International got some good publicity."

Cleveland's plight was typical. James Funero, secretary of the Home Builders Association, called building workers the "invisible Americans." Cleveland can count only about 10,000 skilled building tradesmen—about half the number required to put up the 50,000 homes Cleveland expects to build over the next five years. But less than 300 apprentices are in training. Veterans, now returning at the rate of 7,000 a month, are being discouraged from entering the trades, Veterans' Information Center director Frank E. August said. Some 40 per cent of the veterans visiting the Center had expressed interest in building work, August said, but "only a handful actually got into it. Either the long training periods, low starting salaries, or prohibitive initiation fees turn them away or they get the plain old brushoff."

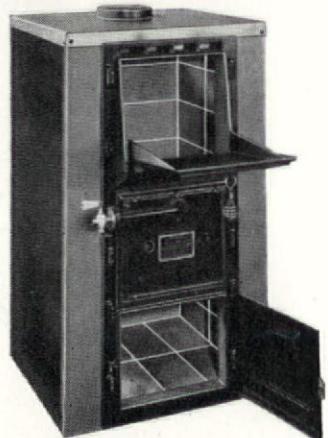
**Standardized Programs.** The federal government's Apprentice Training Service continued its manful paper battle to recruit new workers. All the major crafts have now adopted programs of standardized training practice. The last four trade groups signed up last month—bricklayers, plasterers, modeling and cement, asphalt and composition finishing. Other building trades had already agreed to adopt the ATS-approved programs. But training agreements, now in effect in 15,600 construction "establishments", tend to codify existing trade arrangements rather than to point the way to needed changes.

Back of the building unions well-known reluctance to open their ranks was Buildings old dilemma: would the years of feast always be followed by years of famine? The sharply fluctuating building cycle and seasonal unemployment had fathered restrictive union practices. And as yet nobody had found the magic formula that would produce stabilized building employment and a guaranteed annual wage. Thus, while Building prepared for what may be the biggest output it has yet reached, labor clung fearfully to its traditional ways, remembered such training swindles as the New York Coyne Trade School of the twenties which sold a journeyman's diploma with a six weeks course. Building employers, on their part, ruefully pointed to such examples as the famous AFL Washburn Trade School in Chicago, of which it is still said that "it's harder to get into than Harvard" or that "you have to be the son of a son of a plumber to be admitted."



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INCINERATION

for the incineration load  
in that home or apartment  
you are designing . . .



Why KERNERATOR? Because this unit is designed and constructed by those who have made "incineration" their special work for nearly sixty years. Our engineers know incineration of combustible wastes regardless of kind or where accumulated.

The KERNERATOR is ideal for the home, apartment house, small commercial building or institution. It is designed to provide large capacity within small space in compact units. Two general types of KERNERATORS are available: Bricked-In and Portable. Each type is well constructed and designed to give trouble-free service for years.

If you would like help when detailing the plans for the KERNERATOR, our incineration specialists will be glad to help. We believe, however, you will obtain sufficient data in our Bulletin 160. Why not send for a copy today?

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**DESTRUCTOR CO.**

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# PENBERTHY AUTOMATIC ELECTRIC SUMP PUMPS

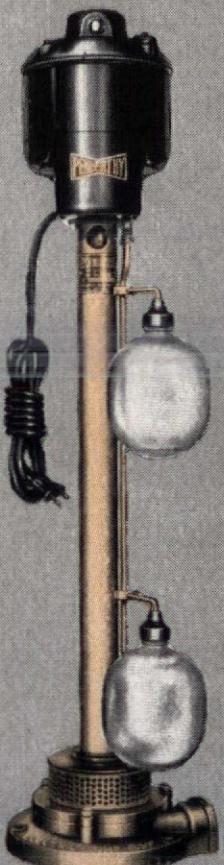
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MODEL 46



MODEL M  
*Made for 5 Different  
Sump Depths*



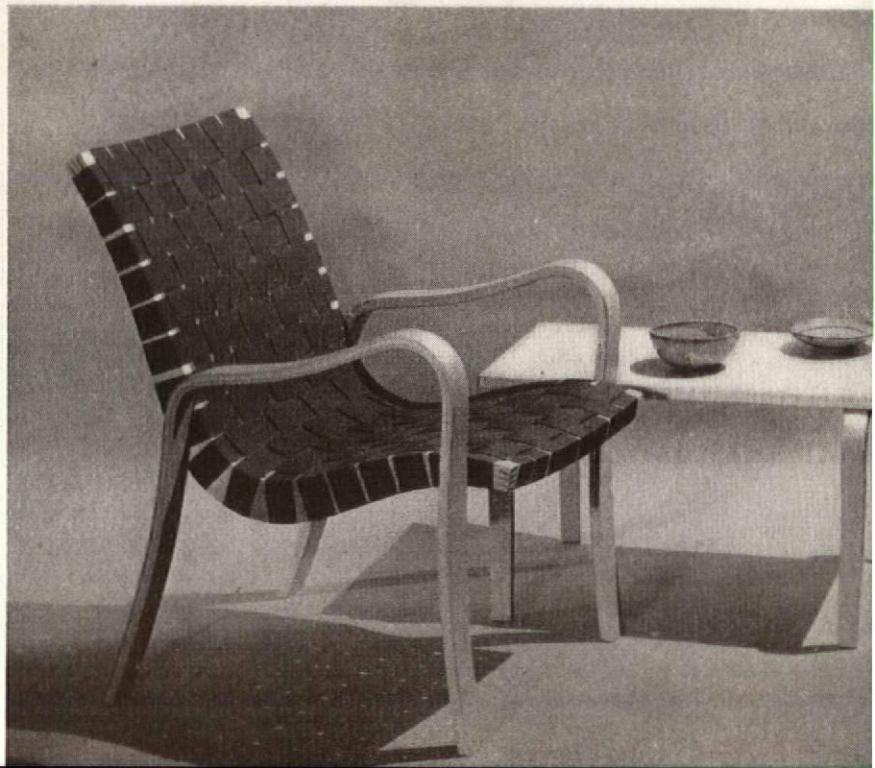
MODEL 45

PENBERTHY INJECTOR COMPANY

Canadian Plant—Windsor, Ont. (Manufacturers of Quality Products Since 1886) DETROIT 2, MICH.



**THE NEW ARTEK-PASCOE** line includes more than forty-five different pieces. These illustrations will give you an idea of their simple, clear-limbed beauty—their wide range of size and form. Here, for example, are highly adaptable sofa units—several varieties of tables, occasional and side chairs. Here are buffets for a dining room that are equally effective as storage chests in an office. Here are stacking stools and lamps, the ARTEK-PASCOE swivel arm table lamp, in particular. For details and prices, better write us today.



# Beauty...born inside out!

**WE'D LIKE YOU TO KNOW** that someone is building furniture today the way you create a good house . . . *from the inside out.*

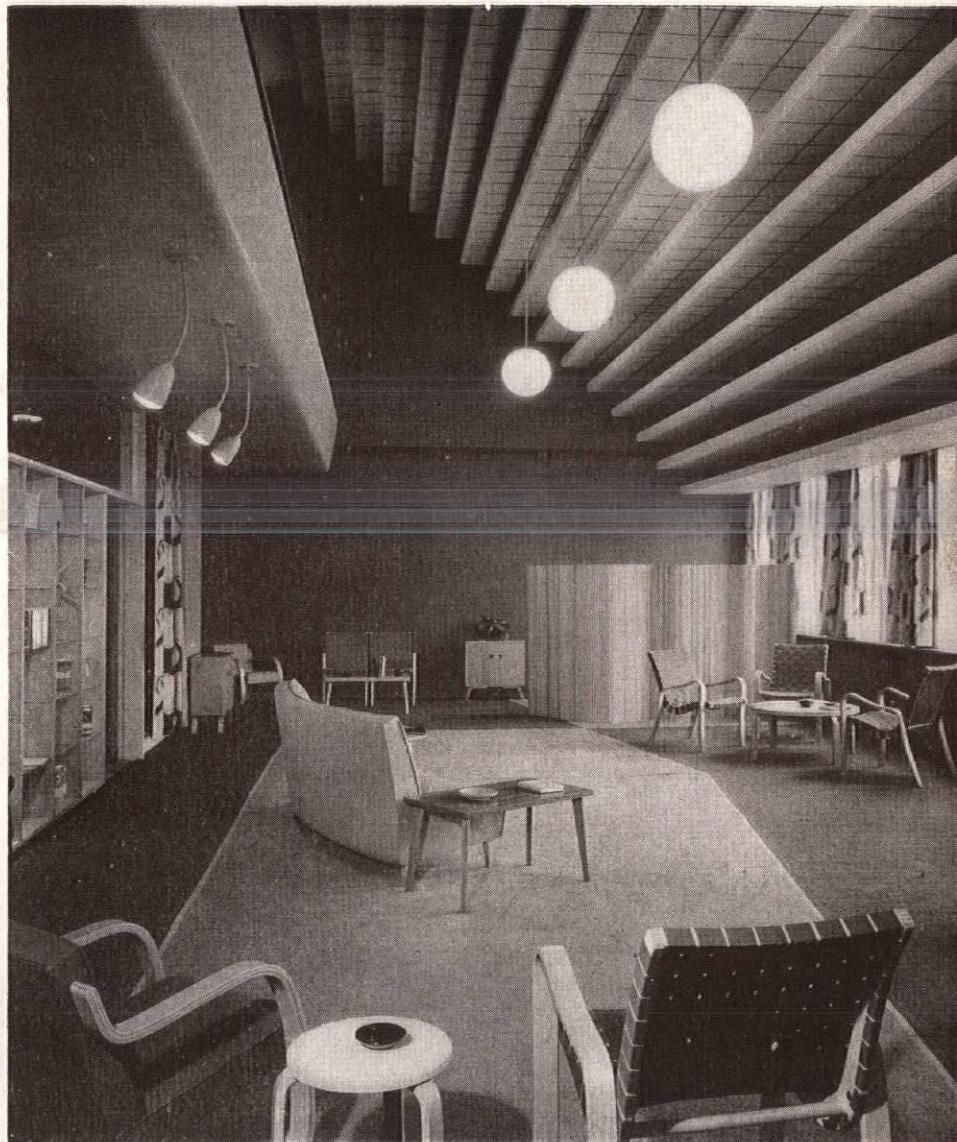
Working with the new resin glues and the natural bending properties of wood, ARTEK-PASCOE has eliminated much of the laborious and expensive joining of traditional furniture . . . developed a truly American design of a lightness, grace and strength never before possible.

Here is undiluted modern, with no nonsense about it.

You will find an amazing versatility in these new ARTEK-PASCOE pieces—whether you are planning a hospital waiting room, a new hotel, apartment, lobby, or any interior project that calls for freshness and good taste, comfort and efficiency.

Over forty-five different pieces are represented. All are rugged, honest maple—clear-finished in natural grain. Upholstery fabrics are plentiful, fanciful—many by our own designers. And prices, happily for your clients' welfare, are modest.

This new line, supplemented by ARTEK-PASCOE's well-known Custom Service, is available on a contract basis. Full details on request.

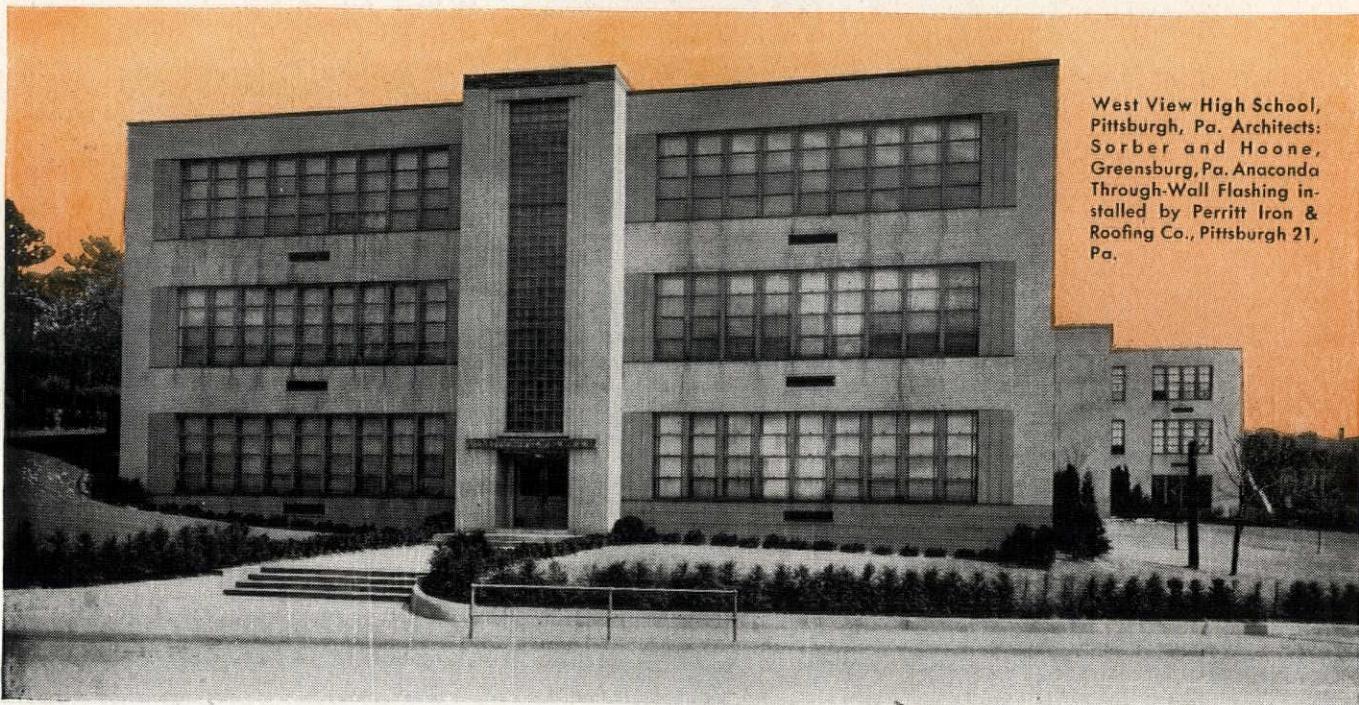


**NEW RECEPTION ROOM** for book publishers, Reynal & Hitchcock. This remodeling project makes an inviting and flexible interior.

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West View High School,  
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Through-Wall Flashing in-  
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## *Frost and Dampness kept OUT* with ANACONDA THROUGH-WALL FLASHING . . .

THIS MODERN Pittsburgh school building is well protected from damage caused by seepage of moisture through brick and masonry. It is equipped with Anaconda Through-Wall Flashing . . . *the flashing that drains itself dry.*

The special design of Anaconda Through-Wall Flashing offers other marked advantages: The zig-zag ridges provide a strong bond with the mortar and prevent lateral movement in any direction. The flat selvage permits neat, sharp bends. And in addition, adjacent lengths are easily locked endwise merely by nesting one or two of the zig-zag ridges.

Anaconda Through-Wall Flashing is a patented product made only by the American Brass Company. For additional information write for Publication C-28, or refer to Sweet's Catalog.

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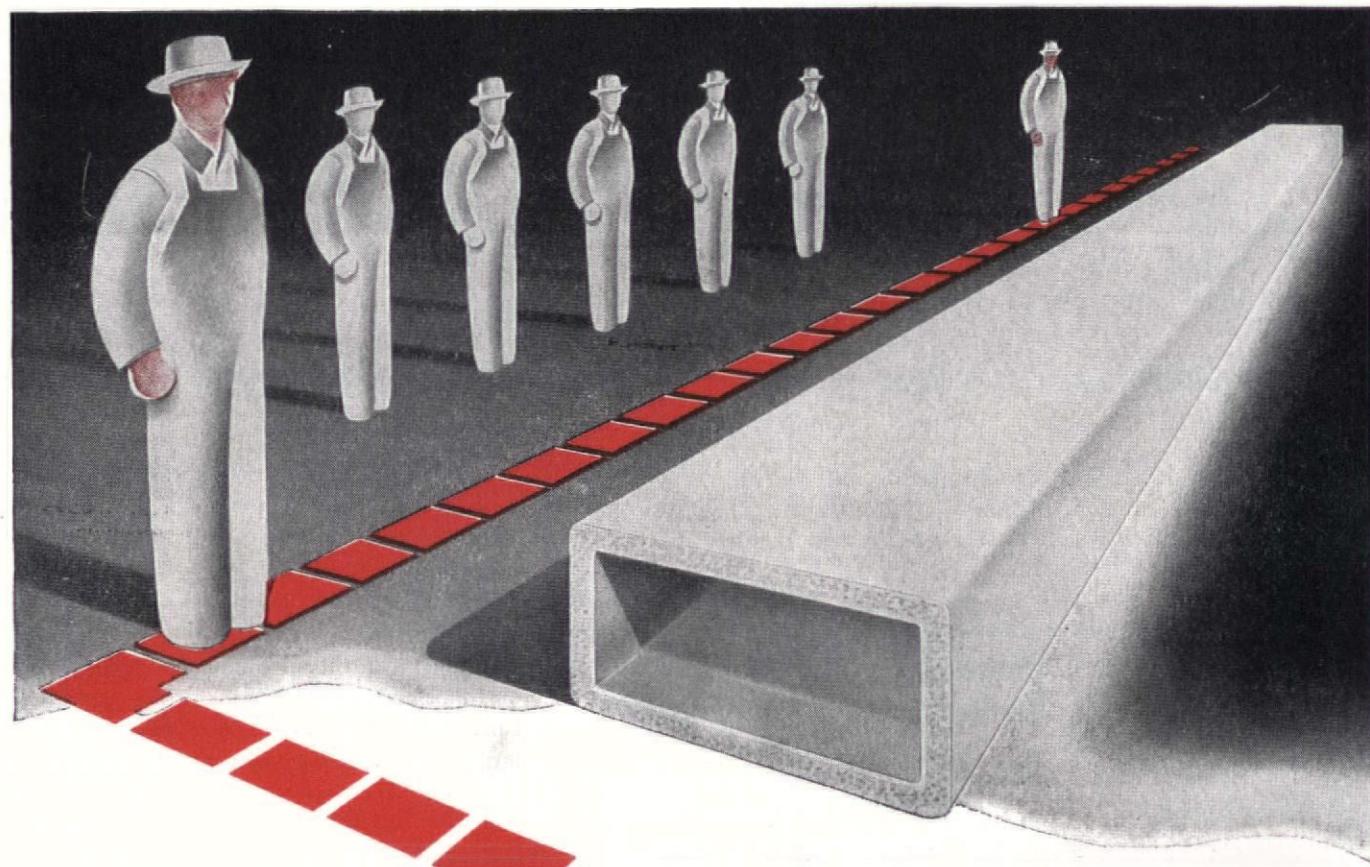
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# Anaconda Copper



Anaconda Through-Wall Flashing will be furnished in standard types for 8" and 12" walls.



## 5 Messy Jobs Get the "go by"!



**BLOW HOT! BLOW COLD!** Carey-duct will deliver the load with minimum change in temperature.



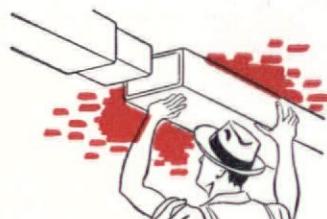
**40% TO 50% QUIETER.** Carey-duct carries higher velocities . . . means greater capacity

**Carey duct** takes the "mess" out of installing air conditioning in old buildings . . . minimizes noise and interference with daily routine.

It comes in *prefabricated* units that eliminate 5 out of 7 major installation operations. No cutting of plaster for furring . . . no insulating . . . no acoustical treatment . . . no erecting supporting framework or fussing around with lath and plaster.

And, being asbestos from core to cover, Careyduct is also fireproof . . . can't rust.

For quiet, efficient air conditioning systems in new buildings or old, specify Careyduct—the *prefabricated* acoustical, insulated duct. For details consult your nearest Carey Branch or write—



**INSTALLED FASTER** than ordinary duct . . . by any qualified sheet metal worker.



**GOOD LOOKING.** No unsightly joints. Takes any finish or looks good unfinished.

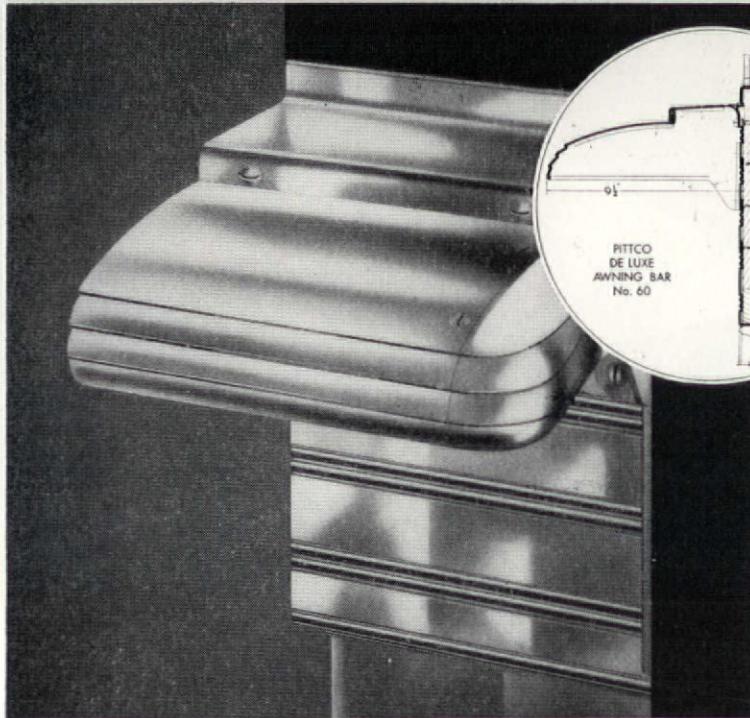
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THE PHILIP CAREY MANUFACTURING CO.  
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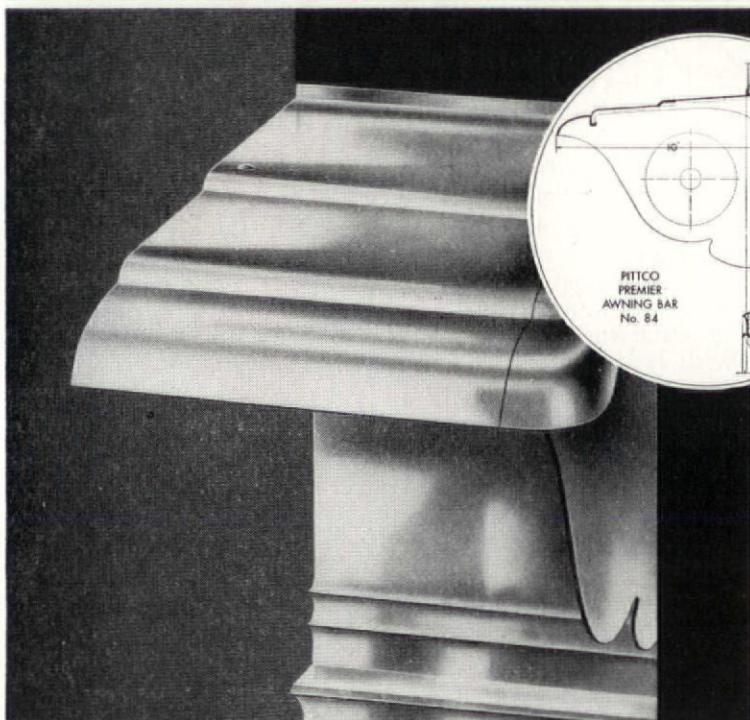
Careyduct • Industrial Insulations • Rock Wool Insulation • Asbestos Shingles and Siding • Asphalt Shingles and Roofings  
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# Now... Pittco Metal offers two outstanding lines



**PITTCO** DE LUXE

Imaginative planning has made Pittco Store Front Metal artistically as well as functionally suitable for every store front need. This Pittco De Luxe awning bar gives operating mechanism and awning roll adequate protection from weather. It is designed to harmonize with any combination of shapes in the De Luxe line. The extruded method of manufacture gives it the sturdy strength, clean, sharp contours and perfect color and finish which are characteristic of Pittco De Luxe Store Front Metal. And these distinctive features explain the constant use of Pittco De Luxe on those jobs where high quality is demanded. The bars, mouldings and sash of the De Luxe line combine to make store fronts impressive and appealing.



**PITTCO** PREMIER

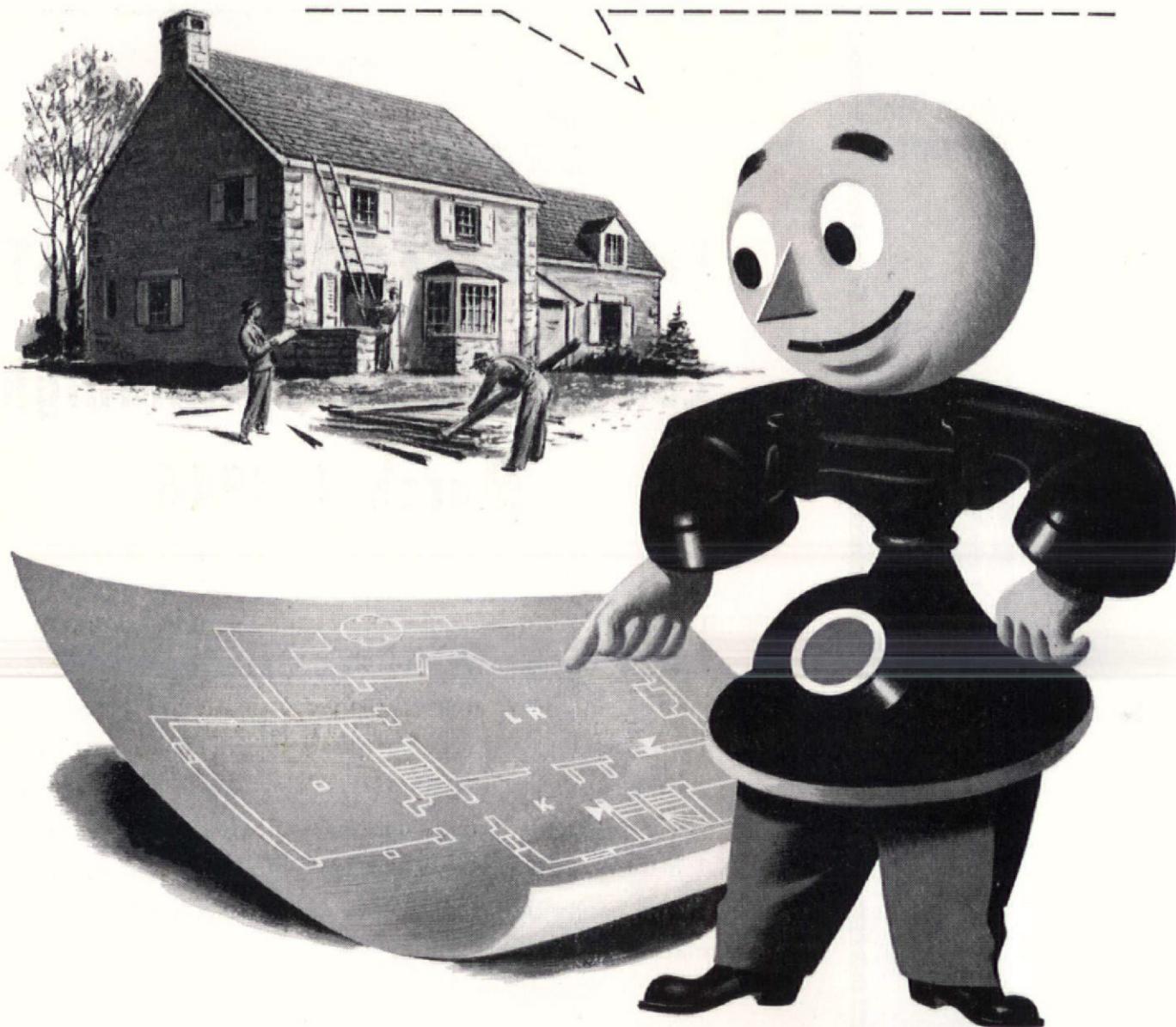
Although lighter in weight than Pittco De Luxe, the new Pittco Premier line embodies the same imaginative styling and painstaking craftsmanship which has made the De Luxe line so popular. In the Premier line architects will find that the perfect harmony between units makes it possible to create a wide variety of pleasing and attractive store fronts. The Pittco Premier construction can be set more quickly and easily than any other metal construction. All setting operations are carried on from the outside and the procedure is so simple that a substantial savings in setting time is effected. Pittco Premier is styled to provide a shallower reveal for show windows than is given by the De Luxe line. Being light in weight and moderately priced, Pittco Premier is the ideal choice for jobs which require quality metal at an economical price.



**PITTCO STORE FRONT METAL**  
PITTSBURGH PLATE GLASS COMPANY

*"PITTSBURGH" stands for Quality Glass and Paint*

## **"Telephone outlets, too! That shows good planning"**



Even though some people are still waiting for telephones, alert architects and builders are not forgetting to plan for the days when they'll be available without stint. Built-in telephone facilities—with conduit concealed out of sight in the walls and neat outlets all ready for connection—add much to a house at little cost.

They avoid exposed wiring; make it easy for the home owner to have telephones wherever he'll need them—living room, bedroom, hall, kitchen or other convenient locations. Every modern home should have built-in telephone facilities. Your telephone company will be glad to help you plan a good telephone layout for any residence.

**BELL TELEPHONE SYSTEM**



*Magic Chef* DESIGN  
ENTERS SECOND MONTH  
**Competition Ends Midnight,  
March 4, 1946**

The Magic Chef Design Competition, sponsored by ARCHITECTURAL FORUM, is the first important one of its kind in the field of industrial design. It is, in effect, a challenge to the profession to show whether or not product design can be advanced through this method. In addition, it offers architects in particular an incentive to extend their design activities from the home itself to one of the most important items of equipment in it. This competition does not close until midnight, March 4th, so there is still time to secure the book of rules and instructions by mailing the attached coupon.

# COMPETITION



## *Competition open to*

**ARCHITECTS • ENGINEERS • ARTISTS  
DRAFTSMEN • STUDENTS • OTHERS**

with the exception of employees of the American Stove Company and its subsidiaries, The Architectural Forum, and advertising agencies which serve the American Stove Company and its subsidiaries, and the families of all such employees, or employees of other range manufacturers.

*Grand Award \$5,000*

*Second Award \$3,000*

*Third Award \$2,000*

Fourth, fifth and sixth winners will each receive award of \$1,000. The next 10 contestants will each receive award of \$500. Contest ends midnight March 4, 1946.

## *Magic Chef*

### GAS RANGE DESIGN COMPETITION

SPONSORED BY



350 Fifth Ave., New York 1, N.Y.

GEORGE NELSON, A.I.A., Professional Adviser, c/o The Architectural Forum, Dept. F, Empire State Building, 350 Fifth Ave., New York 1, N.Y.

I intend to enter the Magic Chef Design competition. Please send me the program, including the conditions governing the competition and awards.

Name \_\_\_\_\_

Firm (if any) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Check one: Architect \_\_\_\_\_ Designer \_\_\_\_\_ Draftsman \_\_\_\_\_ Student \_\_\_\_\_

Other Occupation \_\_\_\_\_

# LETTERS

Exit Prometheus . . . Public wants explained . . . Vive Conservative Modern! . . . Baldwin in the Balance.

## PRE ATOMIC ATTACHMENT

### Forum:

It is with increasing alarm that I note the cultural lag fostered by your publication. Surely to continue publishing houses with such outmoded devices as fireplaces—"Turn down the thermostat, my dear, I want to light a fire in the fireplace."—(which probably smokes anyway) indicates nothing but a lack of intellectual honesty on your part: a reluctance to face up to the fact that a fireplace is nothing but a sentimental hangover from which we are all too long in recovering.

In this age of the atomic bomb we must seek to bring our morality, ethics and emotions into step with our intellectual and scientific advancement. We should not hesitate to cast off such sentimental attachments as drag us back from the threshold of the atomic age.

DR. RENFREUX KIRSCH

*Directeur, Institut Polytechnique des Arts Contemporaines et Mécaniques. (en exil)*

The FORUM's intellectual honesty still permits it to countenance a reserve of matches and kindling—just in case.—ED.

## NOISE AND AGONY?

### Forum:

Believing that you are interested in increasing the appeal of your magazine, I am writing you frankly, after the urge to do so for many years. Having been recently president of the Real Estate Men of Florida, and having been in this game for 21 years, I know something of what the public wants in homes and commercial structures.

You have a very high-grade magazine and I have taken it for a number of years, but I think you are badly in need of ideas for better homes with *charm* and *personality*. As you know by recent national survey, the new crop of home owners will still want a house that looks like a home, and not the product of a bad night's dream.

We are certain the public still wants to build *happy, beautiful, charming* and *delightful* homes; if you will give some thought to this in your coming issues. Your fine magazine often reminds me of the modern idea of most present day bands and melody—noise and agony.

Please do not feel badly about this letter, but I think yours is too important a publication to remain very one-sided. After all, architecture is *for* the people, and not

for people to be treated as architectural guinea-pigs.

STEPHEN F. McCREADY

*Ocala, Fla.*

Perhaps something between the dinosaur and the guinea pig?—ED.

## SOUND PROOFING

### Forum:

I can't help wondering about the future of architecture in the United States compared to the progressive work in Switzerland. An example of present day thinking in America is your article on soundproofing with architect Sack's design for a duplex (FORUM, Sept. '45, p. 244).

He has nothing new either in planning or engineering. The project has four additional stairways at \$75, plus framing for same at \$25, and four additional fireproof doors, making a total of \$540. So what does he save? There is a loss of 33 square feet per apartment per floor, making a total of 264 square feet. The present plan has a double partition between living rooms and obviously the partition on the upper level separating the two bedrooms is soundproofed and fire-retarded. Bedrooms adjoin a public hall—a noise transmitter.

In non-fireproof buildings, walls separating apartments must be fire-retarded. On the upper floor the fire-retarding is in a zig-zag partition.

In my suggested scheme only the short wall from public hall to rear wall need be soundproofed and fire-retarded. The rear covered area can be a balcony.

MARIO J. SERGIO, R.A.

*Jersey City, New Jersey*

Reader Sergio's design, a conventional one-floor scheme, ignores the main point of Sacks' duplex plan which separates the sleeping quarters of each apartment from the living quarters of adjoining apartments by sandwiching together the living levels. Since publication this scheme has been granted patent rights by the U. S. Patent Office—ED.

## CONNECTICUT MODERN

### Forum:

I am writing you in regard to your article in TIME of October 15, 1945, under the heading of "Art"—sub-title, "Conservative Moderns."

Has the Manhattan Museum of Modern Art ever heard of Naugatuck, Conn? If it hasn't, I think it should, because Naugatuck is in the Northeastern States, and has at least six more accepted "conservative moderns," of which I am sending a few prints (see cut). The owners of these

homes, situated in good old colonial New England, will agree that layman Russell Lynes is all wet in his description of functionalism and its need of modern furniture, etc. Their conventional living and belongings have blended in with their functional homes. Yet we have large windows and no cellars or attics. We do have ample conveniently planned storage space. Conservative Modern is the *real American architecture* that will live for years to come. I want to see more of this well-proportioned, well-planned mass and less false fronts and would-be Renaissance.



Naugatuck Sample Louis T. Alexander, Architect

The only thing I will agree with Russell Lynes on is his statement about bankers not accepting Conservative Modern. It took me two years to convince local banking institutions as to the merits of these houses, but once the ice was broken and they realized the resaleability, the sailing was smooth.

GARDNER F. WOOD

*Naugatuck, Conn.*

## STARRY EYES BEDIMMED

### Forum:

All good things come to an end—and so has the "good" FORUM! The splendid issues we once knew—"Design Decade," "The New House of 194X," "Domestic Interiors"—must all have squirmed in the files when the November issue came out. The designs in "Building Preview" are only pale shadows of the fine "Buildings for 194X" which FORUM presented in 1943. Where are they now?

Our faith is gone. We were starry-eyed about FORUM once, when it was first with modern in this country, but today it is modernistic. Tomorrow it will be modernesque?

This backward trend (except for the swell Design Analyses) has been noticeable for the past several issues, but our fears are confirmed only now and we are stirred to action. The affront of this monstrous col-

(Continued on page 40)

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lection of Beaux-Arts pseudo-modern, appliquéd designs is too much. We certainly don't quarrel with the publication and fair appraisal of a representative cross-section of the work being done now, unstimulating as that might be. What we cannot stomach is the editorial labeling of such trash as "clean-cut design," "past and present meet without fighting," "straightforward design," etc., etc.

Any serious critical examination of these projects will show that, with three or four exceptions, they are not representative of the best current work and we strongly protest their being presented as such.

Can it be that the much-berated Mr. Baldwin has converted the Editors of *FORUM*?

Members of the Masters class,

FRED BASSETTI	F. HAMPTON WHITE
HARRY GEDDLER	MORTON POLIMICK
IRVING J. MARTIN	JOSE D. FIRPI
ARTHUR I. DAVIS	DONALD OLSEN

*Harvard University, Cambridge, Mass.*

*FORUM* will gladly grade Harvard Masters theses.—ED.

## MORE BALDWIN

Forum:

While I would be the last man (or do I mean the first man?) to fan the dying embers of the great Baldwin-*FORUM* feud, I feel that it would be unjust to my public (my public is Richard Bennett of Yale) to deprive them of this thought for the day: The obvious difference between the Baldwin locomotive and the Baldwin architect is that the latter is loco with no motive behind it.

Before Mr. Baldwin levels his blunderbuss (we missed the bus, in his first blast) at me, let me explain that his views on classic versus functional architecture are his own affair; his frankness in expounding his views is commendable and he deserves the thanks of the profession for inaugurating a very stimulating controversy. If I know Mr. Myers, and I do, he is undoubtedly praying that nothing will happen to prevent Mr. Baldwin from continuing the battle.

No, Mr. Baldwin has a right to be wrong. Personally, I would rather be Wright than wrong, although I would like to point out to my valued friend Frank Lloyd that there is nothing new about dry cleaning the patrons in his Guggenheim gallery, as they enter. New York night spots for years have been cleaning the patrons, as they leave. But to return to Mr. Baldwin; on matters of esthetics he can take his own position and defend it as best he can, but he has one belief that infuriates me.

He thinks the editor of an architectural

journal should be an architect; in fact, must be an architect to be able to represent the profession accurately.

This theory is a flopoo of the first water.

You might as well assert that the president of the Timken Roller Bearing Corporation has to be a Holy Roller. Or nominate Harpo Marx as the logical editor of *Harpers* magazine.

The fact that certain architects are also good editors is purely coincidental. It has always been a mystifying thing to me that more architects do not take to writing and editing; as a profession they are far more entertaining and articulate on paper, and on the platform, than any other professional men I have encountered. Engineers are the worst, you will be pleased to know. But to assert that only an architect can edit an architectural journal is nonsense.

Furthermore, an editor or an editorial board has not only the right but the duty to establish a policy, whether that policy meets with 100 per cent approval from their subscribers or not. If Mr. Myers and his colleagues feel that organic architecture is the thing to feature, then the final decision on whether or not they are right lies with the public and not with the architectural profession.

If I ever find a newspaper or a magazine with whose ideas I invariably agree I will not be able to cancel my subscription fast enough. It has always seemed to me an appalling waste of time to read only things you agree with. If the *FORUM* had been presenting the type of material with which Mr. Baldwin agreed, Mr. Baldwin would never in a thousand years have written and told them so, as this is not how it works. Instead, the impact of ideas with which he furiously disagrees stimulates him to inaugurate a very entertaining exchange of epithets. Thus everybody is happy.

ROGER ALLEN, Architect  
Grand Rapids, Mich.

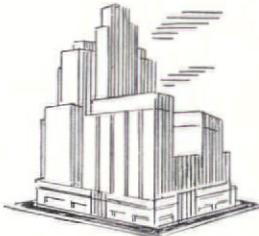
Forum:

There is no convert so fired with zeal as the new convert, and as one reads the letters hurled like granite dornicks at poor old Roger Baldwin it seems as if some mollifying word should be gotten into your record at this time to save our professional faces in 1990.

When the student of that far day lights up the recordak films of these *FORUM* pages and laughs at the funny things foxy grandpa did to his "modern" buildings back in the days of the New Deal, his eye should be greeted by at least one compassionate donkey with a good word for what Mr. Baldwin feels but is unable to express.

(Continued on page 44)

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good in these uses. It is no Johnny-come-lately — but a thoroughly tried, thoroughly tested and well established material. You take no chances when you specify Formica.

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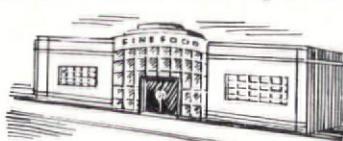
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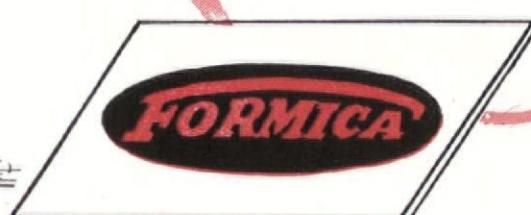
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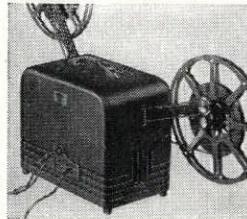
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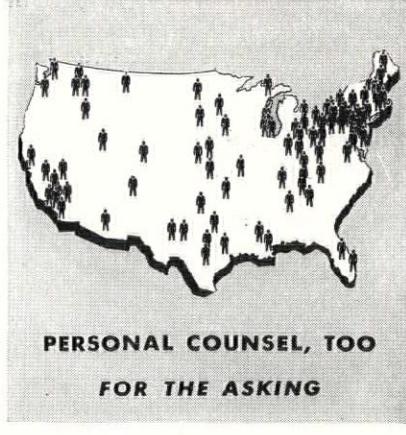
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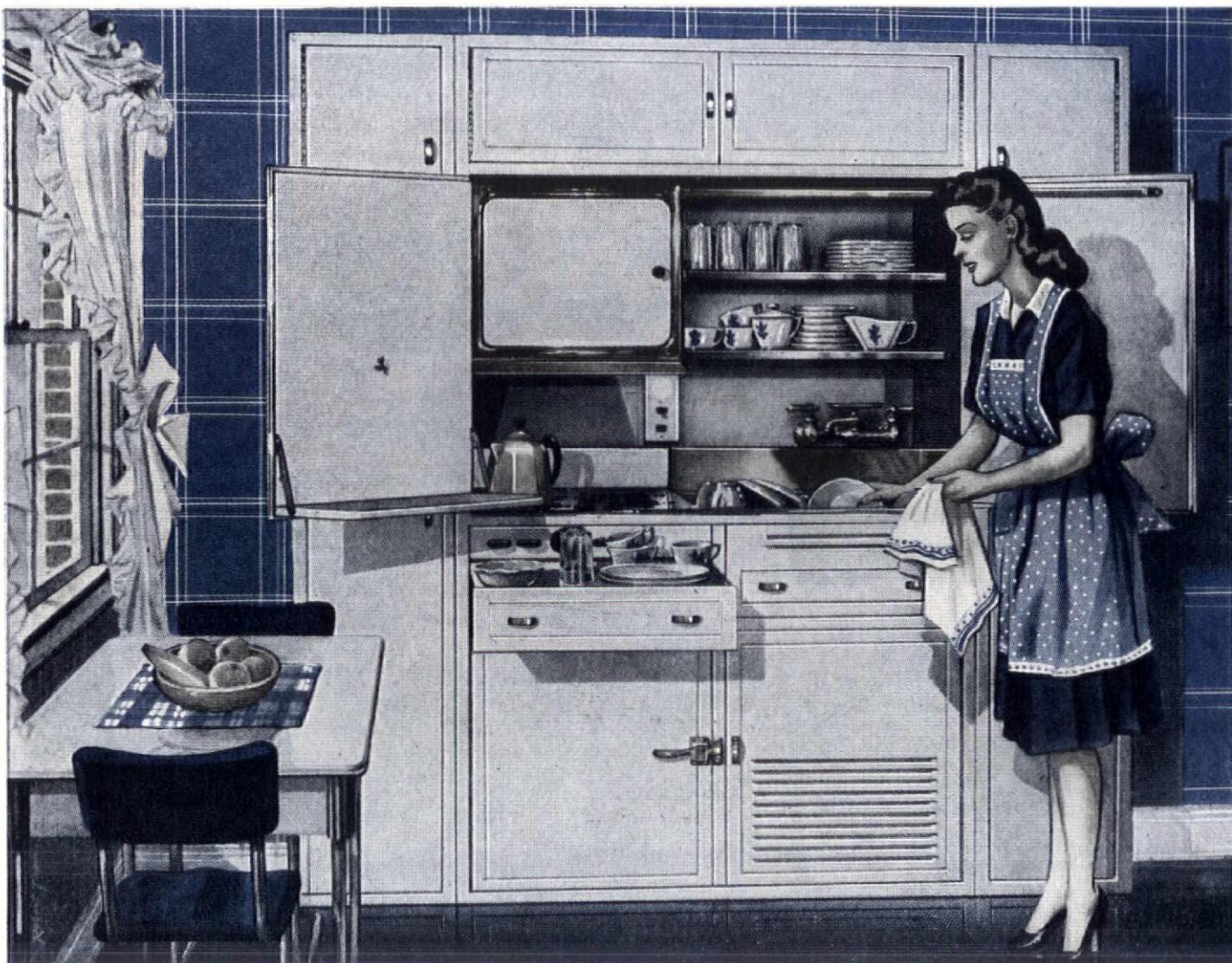
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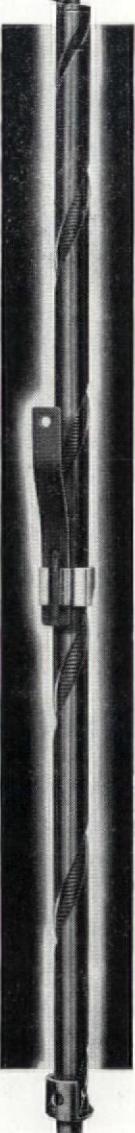
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Mr. Wright and Mr. Sullivan would both lend me a hand to fend off these self-righteous protagonists of streamline, who have so recently left the Land of Wooden Doric and Cement Gothic. One should therefore be content to note, with much hope in our grandsons, that Mr. Beardsley Rum, now executive of Macy's Department Store in New York, was right in the first place when he urged upon the stuffy, authority worshipping psychologists and sociologists of Chicago University, that, even beyond the hunger of sex and food—NOSTAGLIA is really the factor in human behavior that has always motivated the most significant work of men.

OK, then, you self-labeled "modernists," let's see how you are going to acknowledge that factor as a function in your form pattern. Ignore nostalgia and your art will not outlast its plumbing gaskets.

Tradition is competence inherited from past good deeds, not the reproduction of old junk that once served a purpose, and to such competence we must give honor.

WILLIAM GRAY PURCELL, Architect  
Pasadena, Calif.

#### DINING ROOM FUTURE

Forum:

I have been following your "House Ideas" series in the FORUM and LIFE, both of which we receive—somewhat irregularly—out here on the Pacific. Like millions of other servicemen I have high hopes of owning my own home sometime after the war, and have a pet feature I hope to have incorporated in it.

Recent house plans show that more and more people realize that they cannot afford the luxury of a dining room. The expense of that area (or volume) of a house for the sole purpose of eating doesn't seem to be justified by the pleasure of having a completely separate dining compartment.

The present tendency seems to be to combine the dining area with the living room, or to have it in the form of a breakfast nook off the kitchen. Neither of these solutions would be satisfactory to my requirements. I believe that a separate dining room is very desirable—that the pleasure of eating deserves attention separated from the pleasures of living or the questionable pleasure of cooking. However, between the comparatively short eating periods it should not be necessary to "lock up the front parlor for the winter".

The necessity of a gameroom, playroom and secondary living room is and has been apparent, especially to large families. (I had to go visiting to play pingpong, and my three sisters—or usually my family—were inconvenienced when a beau came to

call.) My hope is to combine the functions of the dining room and the gameroom, without sacrificing too much on the compromise. In building a house, I would plan to have extra length at one end of the dining room, which could be separated from the room itself by curtains, folding doors, or other suitable methods.

The dining room would be decorated and furnished in a modern style, but being sure that no part of it "screams" dining room. At party time, the extra portion would be opened, revealing a folding pingpong table, designed to fit on top of the dining room table, an upright piano, cabinets holding a variety of games, and a small bar complete with high stools. A radiophonograph combination would be part of the dining room furnishings. With little effort everything is set for a party or for dancing in a place that is normally darkened and forgotten.

Most present houses have a serving or butler's pantry off the dining room which would serve the purpose. Where space is limited, one or more items would have to be finessed. Possibly it would be just a bar, with games and liquor stowed side by side; or only a pingpong table and a few drawers or cabinets for the equipment. The big problem would be getting people to part with their dining room "suites" of serving tables, sideboards, high back chairs, and glass china closets, and re-equipping with dual-purpose furniture.

L.T. (JC) W. P. KIRK, JR.  
FPO, San Francisco, Calif.

#### INCREDIBLE TOMORROW

Forum:

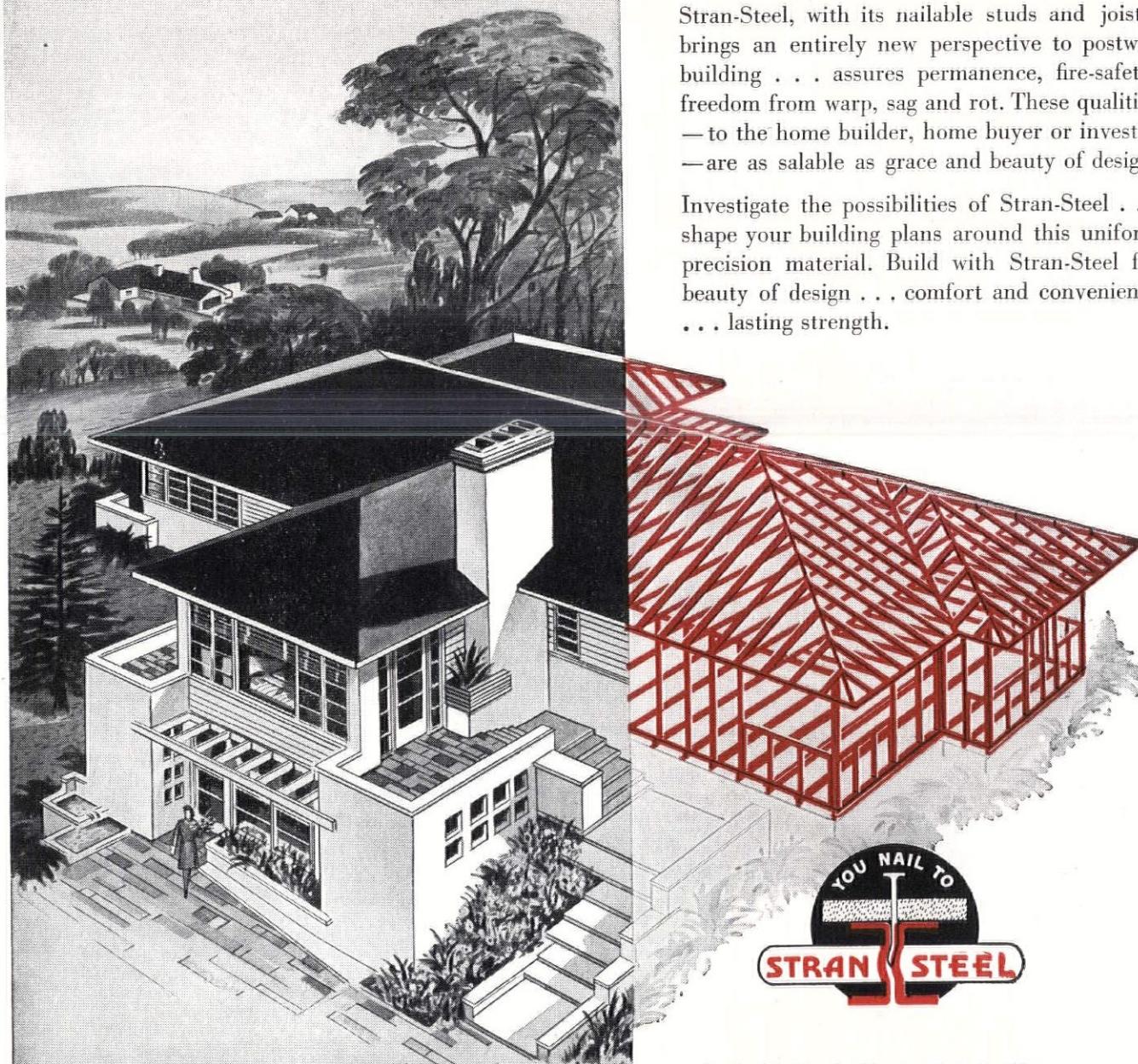
Thanks to the FORUM for the fine report on Professor William Fielding Ogburn's proposal to decentralize American cities, as a defense against aerial warfare. The FORUM of May, however, completely muffed the significance of Professor Ludwig Hilberseimer's *New City*, which proposed in shrewd diagrams and text substantially the same thing. Indeed, the *New City* shows precisely how the objective could be accomplished—the know-how. Not only would our cities be safe from aerial attack. We could, at the same time (by sensible planning) eradicate slums, smoke, traffic congestion, disorder. Yet the author, presumably because he insisted on the need for urban dispersal, was accused of "false idealism". Planned decentralization was a "technical Utopia."

But much has happened in seven months. The single atomic bomb dropped on Hiroshima has shaken the foundations of every large city in the world. Against the atomic bomb there is plainly one defense and one

(Continued on page 48)

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### IN A POSTWAR REFRIGERATOR

American Home Magazine Reader Panel of 1739 women in 1945 gave the following answers to the question:

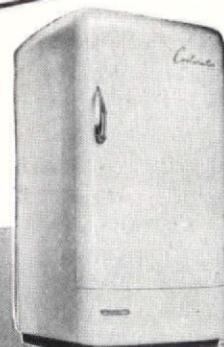
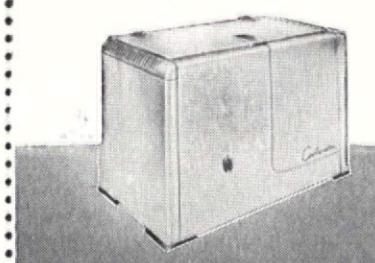
"Please check how you feel about each of the following features in your postwar refrigerator—bearing in mind that they might add somewhat to the cost."

	(1) Must Have It	(2) Like the idea but not vital	(3) Not interested
Storage compartment for fresh meats	69%	22%	2%
Compartment for storing frozen foods	65%	24%	4%
Device that prevents foods taking on odors and flavors of other foods	54%	31%	7%
Bigger compartment for fresh vegetables	53%	28%	6%
Automatic Defrosting System	45%	39%	
Device for removing ice cubes from trays more easily	45%	35%	7%
More space for tall bottles and jugs	46%	33%	6%
Automatic Temperature Control	49%	27%	10%
Adjustable or sliding shelves	36%	40%	
More shelf space in upper part of refrigerator	25%	49%	11%
Motor with less noise	29%	35%	15%
Moister air in cabinet	26%	35%	28%
More ice cube capacity	19%	32%	34%
Water tank with faucet outside	10%	38%	16%
Special butter conditioner	26%	42%	

It's no surprise to us that the New Coolerator has everything women want in a postwar refrigerator—we designed it that way after surveys!

Look at this survey made by an outside independent organization, and then compare with Coolerator! The New Coolerator has a big 40-LB. Frozen Food Locker with enough space for plenty of meats and frozen foods, and only Coolerator has the Magic Flavor-Saver—an exclusive principle of refrigeration that controls humidity, odors, and temperature. The two big Crisp-O-Laters, for keeping vegetables fresh and the end of all Defrosting Problems, make the New Coolerator a favorite with women everywhere!

We will be happy to furnish you with additional information. Just write:  
The Coolerator Company, Duluth 1, Minnesota.



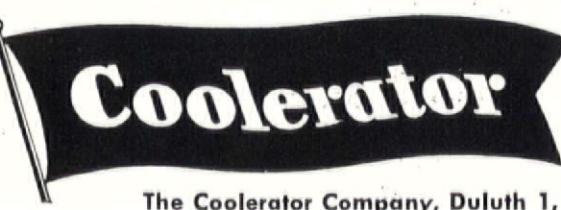
NEW HOME FREEZER . . . another new Coolerator product that women want in postwar homes. 6½-cu. ft. size.

NEW ICE-CONDITIONED COOLERATOR for those who prefer ice. 4-way circulation keeps foods fresh and tasty. 5-cu. ft. —75-lb. ice capacity. 6½-cu. ft.—100-lb. ice capacity.

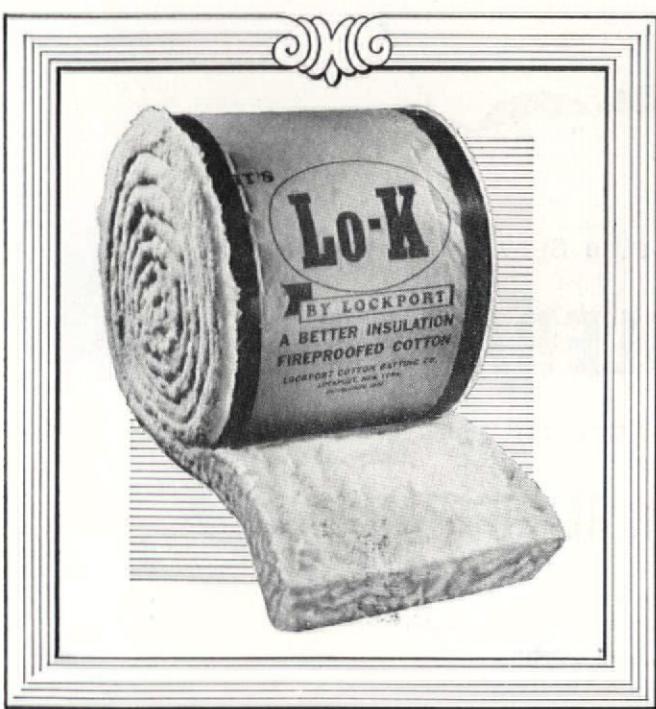


# Coolerator

The Coolerator Company, Duluth 1, Minnesota



## LETTERS



# Prestige for You!

YEAR-ROUND COMFORT  
FOR YOUR CLIENT WITH

**Lo-K**

Lo-K is certain to add to your reputation as a forward-looking architect or contractor. At the same time it assures your client a home of year-round comfort and protection from heat and cold.

Government tested and approved, Lo-K offers 4% to 36% greater insulating efficiency. Feather-light, safe and easy to handle, it cuts installation costs up to 40%. Resistant to rot, moisture and vermin, it provides years of insulating satisfaction. Available in blanket-type, easy to handle, easy to install rolls.

**Lo-K** flameproofed  
COTTON INSULATION

A Product of LOCKPORT COTTON BATTING CO.  
Established 1870

LOCKPORT, N. Y.

MAIL THIS COUPON TODAY FOR  
THE FULL Lo-K STORY

LOCKPORT COTTON BATTING COMPANY  
Dept. AF-1, Lockport, New York

Gentlemen: Send me the facts about Lo-K Cotton Insulation for better building.

ARCHITECT       DEALER  
 CONTRACTOR OR BUILDER

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only decentralization. The very vulnerability of our concentrated cities can only invite a new war—a surprise attack with the hope of immediate knock-out. In one night, each of fifty cities could be a tremendous Pearl Harbor, atomic fashion. We must disperse our cities, or perish in the rubble and ruin of some incredible tomorrow. The time for nice argument is over.

The alleged Utopia of urban dispersal has become the unanswerable need for mankind. The supposed fantasy of yesterday has become the fact of today. The so-called dreamers have been proven the realists. And those self-proclaimed realists of city planning, were they not actually the dreamers all along?

JERROLD LOEGL, Architect  
Chicago, Ill.

If atomic bombs should fall, it is our bet they will "decentralize" the cities long before mere mortals can.—Ed.

### APPEAL FOR FELLOWSHIP

Forum:

This is no echo of smooth diplomatic platitudes; it is a forthright and urgent appeal to the architectural students of the U. S. to take action.

Today, we are faced with a world situation that is perilous and precarious. It is perilous because we now have the power to blow our civilization to less than atoms in a month—perhaps even in a week. It is precarious because we are acutely aware that mankind as a whole is far from being able to use this power to creative ends, for the benefit of mankind as a whole. Power complexes have not been dissolved by the war—rather have they been stimulated to the extent that they can now, if allowed to persist, lead immediately to a far more terrible upheaval of life than we have witnessed during these past years.

With this in mind, we—the architectural students of Great Britain—are making an appeal to our fellow-students throughout the world. We believe that our voice is not too faint to be of no avail.

We call upon our comrades to do all in their power to support the wishes of the common man of all countries; to assume their full responsibilities in directing public attention to the grave significance of local, national and international politics. Without the full participation of every person in the discussion of affairs, through the normal democratic means, there can be no proper basis for just and lasting peace. We must all act first as individuals, as citizens, before we act as specialists, as architects; for there will be no society to use us to the

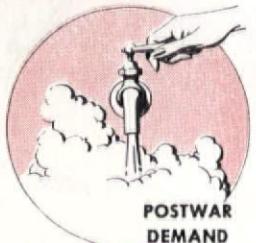
(Continued on page 52)

**WATER HEATING**  
**is going**

**Electric!**



PREWAR  
DEMAND



POSTWAR  
DEMAND

**Postwar Sales  
Will Triple Again**

In the 6 prewar years, sales of Electric Water Heaters almost tripled. And a 1944 survey made for NEMA\* shows that three times as many women want Electric Water Heaters as now have them! They're "what women want," because they're:

**SAFE**—Flameless, fumeless.

**CLEAN**—Smokeless, sootless.

**ADAPTABLE**—Permit short hot water lines—Require no flue or vent.

**TROUBLE-FREE** as electric light!

**ECONOMICAL**—The cost is low for plenty of hot water all the time.

Installing Electric Water Heaters in every house you build, means giving women what they want!

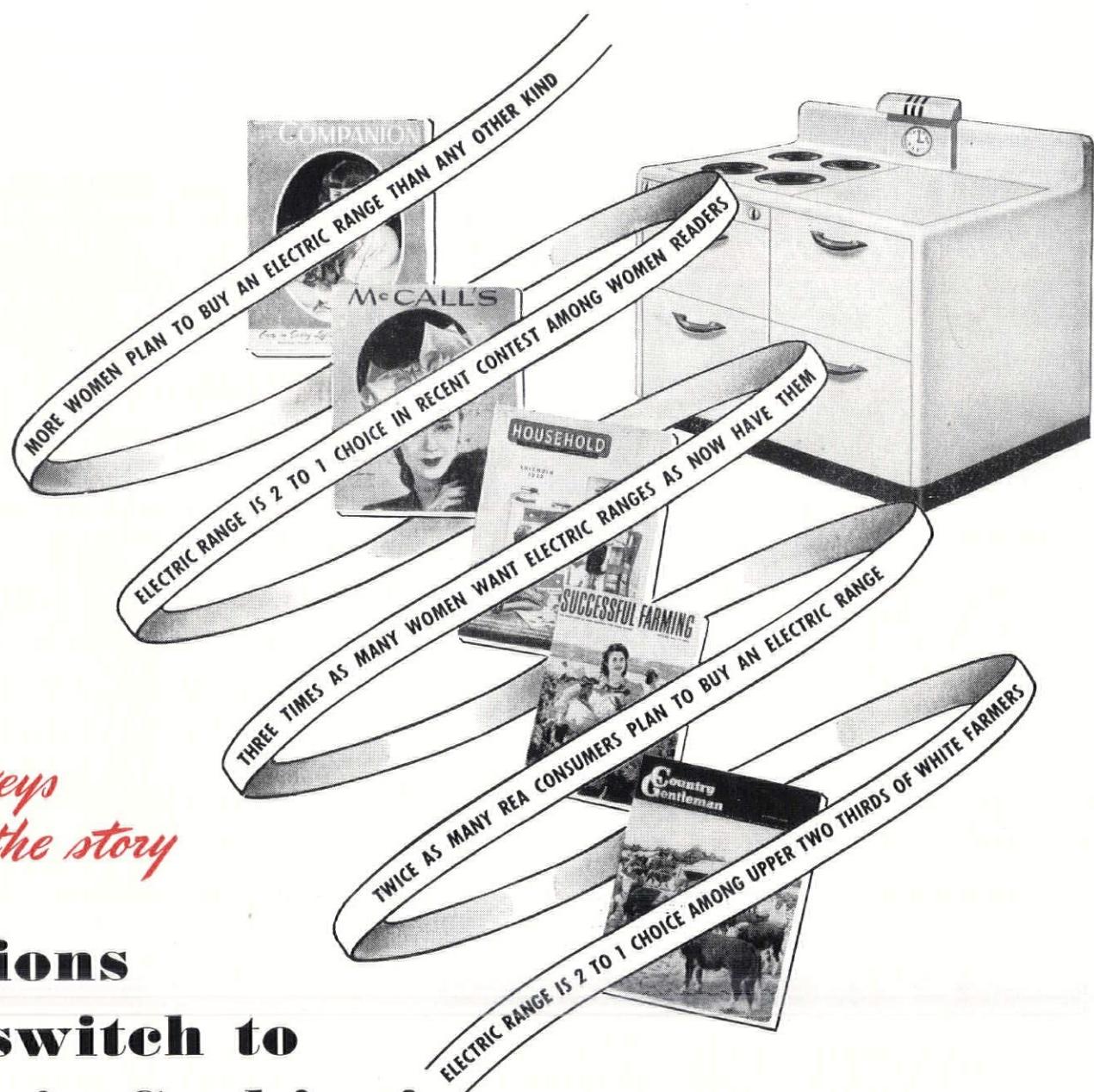
Electric Water Heater Section

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

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THERMOGRAY • THERMO-WATT • UNIVERSAL •  
WESTINGHOUSE

A House Wired For An Electric Range Is Already Wired For An

**Electric**  
**WATER HEATER!**



# Millions will switch to Electric Cooking!

## Wire Your Houses For ELECTRIC RANGES!

The trend is unmistakable. In survey after survey, American housewives have expressed their preference for the convenience, cleanliness, dependability and economy of modern electric cooking.

Among the many unbiased surveys which show the strong swing to Electric Cooking are those made by leading national magazines, such as \*Woman's Home Companion, \*McCall's, \*Household, \*Successful Farming and \*Country Gentleman.

And prewar sales figures further emphasize the swing to electric cooking. Between 1933 and 1941, sales of electric ranges increased over 900 per cent.

You can cash in on this preference and give the houses you build an added selling feature by wiring your homes for electric ranges. Built-in, the cost is negligible—the selling power tremendous.

*Electric Range Section, National Electrical Manufacturers Association  
155 E. 44th Street, New York 17, N. Y.*

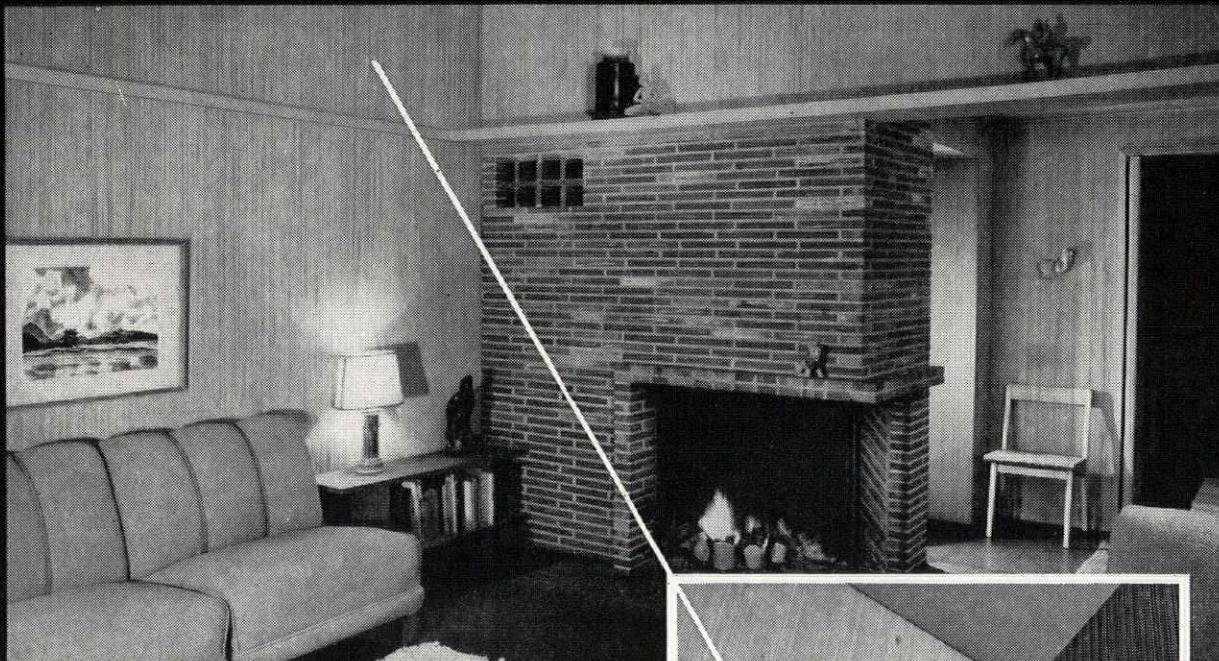
A-B STOVES • ADMIRAL • ELECTROMASTER • ESTATE HEATROLA • FRIGIDAIRE • GENERAL ELECTRIC • GIBSON • HOTPOINT  
• KELVINATOR • MONARCH • NORGE • QUALITY • UNIVERSAL • WESTINGHOUSE

FOR EASIER SALES  
*Wire your houses*  
FOR ELECTRIC RANGES

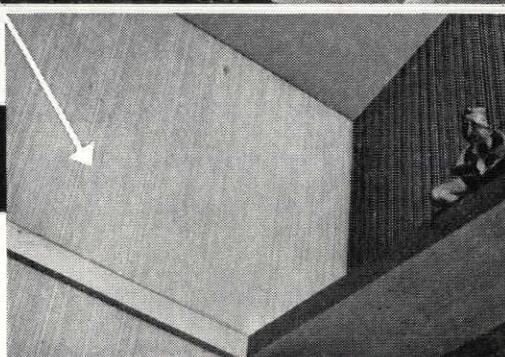


# *Even One Room* paneled with **WELDWOOD**

...makes the house more **ATTRACTIVE!**



• Residence of Mr. Paul Hayden Kirk, Seattle, Wash. It would be hard to picture a more charming spot than this Weldtex-paneled living room. Warm hominess radiates from every corner.



• This close-up shows how the unique, grooved surface of Weldtex creates continuous changes of shading, as light hits the walls from different angles.

The native warmth of wood paneling, even in one room, lends a charm few prospects can resist.

Your clients are sure to be pleased . . . and impressed . . . by your selection of this modern building material.

For Weldwood Hardwoods add extra appeal to every style of house, at surprisingly little cost. They form a beautiful, harmonious background for any type or style of furnishing, from modern to traditional.

All these fine hardwood plywoods, as well as Weldtex\* (striated Weldwood) come in big, easy-to-handle panels 4 x 8 feet. They are installed quickly, easily and, once erected, require almost no maintenance. They are permanent walls.

*Weldwood Plywood Panels are guaranteed for the life of any structure in which they are used.*

Weldwood Plywood distributing units and display rooms are conveniently located in principal cities all over the country. You are invited to visit these display rooms to inspect the many beautiful woods or to obtain complete information and application data.

Practically every hardwood is on the Weldwood list . . . from fine domestic walnuts, oaks and birches, to exquisite imports, such as mahogany, teak and satinwood.

\* Registered U. S. Patent Office.

## Weldwood Plywood



### Plastics and Wood Welded for Good

Waterproof Weldwood, so marked, is bonded with phenol formaldehyde synthetic resin. Other types of water-resistant Weldwood are manufactured with extended urea resins and other approved bonding agents.

*Weldwood Plywood and Mengel Flush Doors are products of*  
**UNITED STATES PLYWOOD CORPORATION**  
New York 18, N. Y.

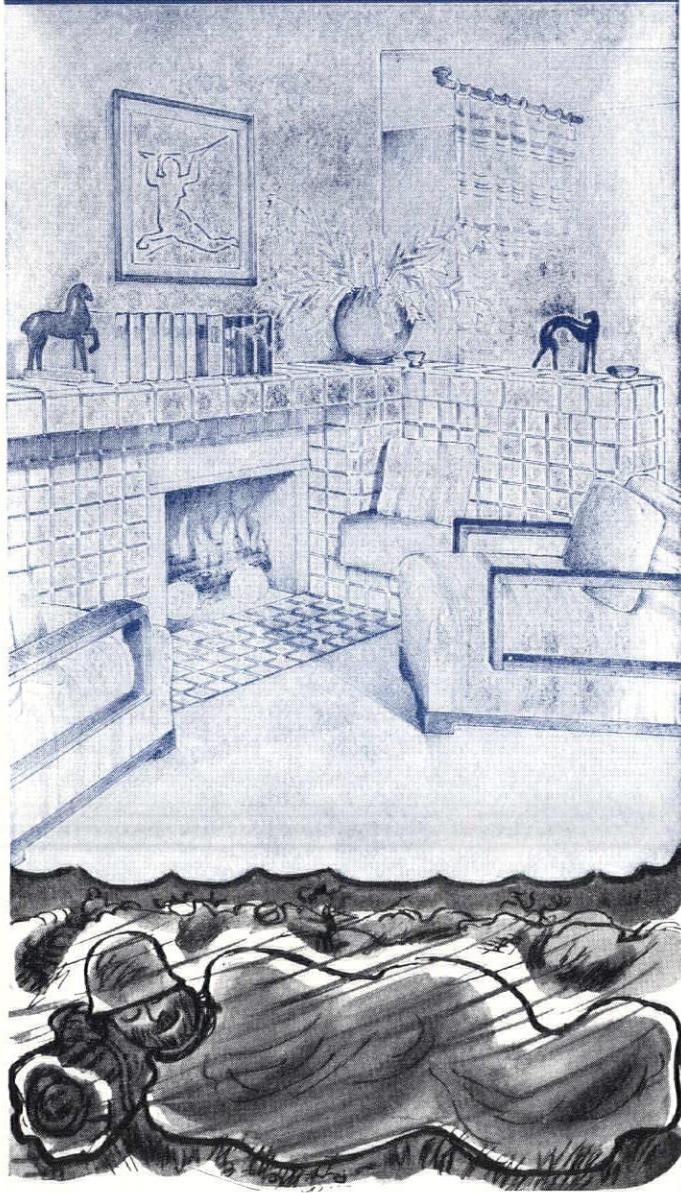
**THE MENGE COMPANY**

Incorporated

Louisville 1, Ky.

*Distributing units in Baltimore, Boston, Brooklyn, Chicago, Cincinnati, Cleveland, Detroit, High Point, Los Angeles, Newark, New York, Oakland, Philadelphia, Pittsburgh, Rochester, San Francisco, Seattle. Also U. S.-Mengel Plywoods, Inc. distributing units in Atlanta, Jacksonville, Louisville, New Orleans. In Canada: United States Plywood of Canada, Limited, Toronto. Send inquiries to nearest point.*

## ★ What they dreamed about



"Any similarity between this and a Suntile fireplace is confined strictly to the color of the flame."

## ★ WHAT THEY SAW...

Beautifully-styled Suntile rooms impart to a home an enviable air of charm and distinction. Bright with color, right for life, they are a permanent source of pleasure and satisfaction. For sanitary kitchens and easy-to-clean bathrooms—for colorful sun rooms and durable recreation rooms—Suntile's lifetime advantages are unequalled. Suntile is superb for these significant extras, too...such as a Suntile fireplace that glows with graciousness...or a Suntile stairway as attractive as it is unique. Suntile provides the answer for decorative results that are delightfully different—symbols of good taste that last a lifetime.



# Suntile

A Luxury Yesterday, Suntile Is Today's Economy

THE CAMBRIDGE TILE MFG. CO.

MEMBER OF THE PRODUCERS' COUNCIL  
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★ THIS SERIES IS BASED ON AN IDEA SUGGESTED IN LETTERS WRITTEN BY CPL. LOUIS A. PERKOVIC OF THE ARMY ENGINEERS IN THE SOUTH PACIFIC. IT'S STILL A WISE IDEA TO KEEP BUYING BONDS. THE SAVINGS THEY REPRESENT ARE AN ESSENTIAL CHECK ON INFLATION AND RUN-AWAY SPENDING.

## LETTERS

# SMITHway WATER HEATERS

*Features That  
Challenge Comparison*

**Permaglas**—the glass-fused-to-steel lining . . . sparkling blue, mirror-smooth, sanitary as a clean drinking glass.

**Beauty of Design**—gleaming white with polished, stainless steel decorative trim.

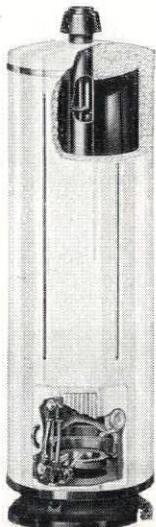
**Neotone Finish**—inside and outside of exterior shell protected by white enamel-baked-on-steel.

**Hidaway Controls**—behind a convenient door. Swing-drain faucet, too, is placed here, ready to swing out when needed.

**Heating Units**—Uniflow gas burner with sharp, even combustion; or, dual electric elements with built-in heat trap.

**Rear-Vu Connections**—no unsightly piping at top—no condensation drip on heater.

**Adjustable Pyramid Base**—with jacks to level heater on uneven floor and take weight off pipe connections.



### SMITHway

Water Heaters lined with **Permaglas**—gas or electric—let you specify hot water as sparkling clean as the source. There's no tank corrosion because **Permaglas can't corrode**.

**Get the Permaglas Facts Now!**

Write today for the illustrated booklet, "The Inside Story of Permaglas."



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**Smithway**  
**Permaglas**  
GLASS-FUSED-TO-STEEL  
TRADE MARK REG. U. S. PAT. OFF.  
WATER HEATERS

full advantage unless we ourselves join the general body of citizens and act, with citizens' rights, as part of that body.

As a contribution to this process, we are taking the initiative in calling a Congress of the architectural students of the world. We have one main aim for this Congress: that, through their social intercourse and the expression of their views on both general and professional problems of common interest, the delegates to the Congress will see the necessity for this faith and tolerance between nations. We hope that delegates, on their return home, will pass on this experience to their fellow-countrymen. If our further wish materializes, the Congress will give rise to a permanent international organization whose main function will be to perpetuate the Congress annually.

We have found it difficult during the war years to contact you, though we have tried repeatedly. Will you let us know whether we have succeeded this time, now that the war has finished and you are back in your schools? Write to us now. We will give you, then, all the details we can of our hopes, aims and achievements so far.

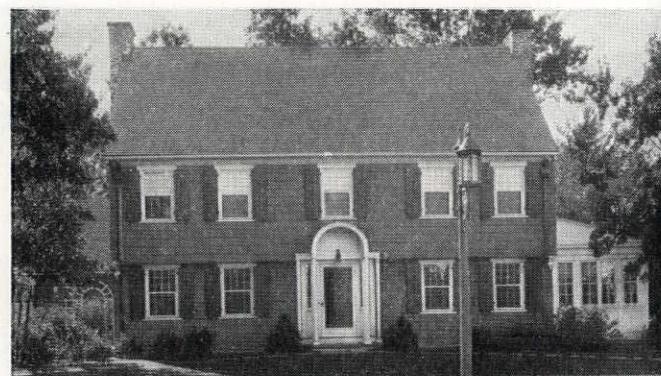
For those of you who wish to begin immediately to organize some preliminary form of national organization whereby the American delegates to the Congress can be elected, we can give you this news. The Congress will be in the late summer of 1946; it will be held for certain in Northwest Europe, probably in London. It will last for a week and its Agenda will be worked out by us, in collaboration with the Corresponding-Members of our Committee who have been elected overseas during the past four years. Amongst the many Correspondent-Members, there is not one, yet, to represent the U. S. A. We trust that you will rectify this omission at your earliest opportunity. All countries are being invited to send as many delegates as they wish, but, naturally, those delegates who most fully represent their country will be most welcome at the Congress.

Will you join us in this adventure?

It will mean hard work and the trouble of securing adequate support for the delegates. That it will be well worth any amount of trouble, provided countries survive the initial pains of organization and actually get their delegates on the way, we have not the slightest doubt.

DONALD BARRON, Secretary

*The International Committee of the  
Architectural Students Association  
c/o Bartlett School of Architecture,  
University of London,  
Gower Street,  
London, England*  
(Continued on page 56)



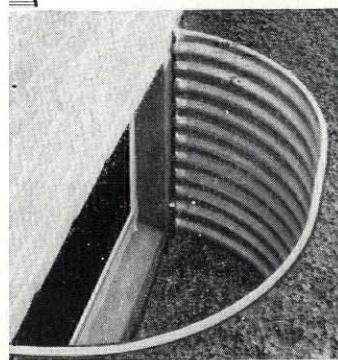
Smith & Bassette, Architects  
**Cabot's Stains...**  
**Suit the Site!**

Architects recommend Cabot's Stains — for they know a house is beautiful only if it is in harmony with its own particular setting! For the loveliest old New England farmhouse, or the most modern building designed, there's a perfect Cabot Stain — from clear, brilliant hues to weathered grays and browns. Cabot's Stains are easy to apply — cost less than paints — and their deep penetration means lasting protection and beauty.

FREE BOOKLET "Stained Houses" — contains complete details on Cabot's Creosote and Heavy-Bodied Stains. Write for your copy and color cards today! Samuel Cabot, Inc., 1265 Oliver Bldg., Boston 9, Mass.

**Cabot's Shingle Stains**  
Heavy-Bodied  
Creosote

**The WHOLE  
COUNTRY demands**



### LUX-RIGHT AREAWALLS

- They're ALL steel
- Completely galvanized
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- Beautify foundation line
- Ready NOW for your job
- See your dealer, or write us for free folder

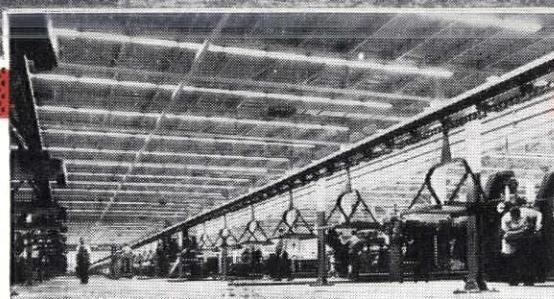
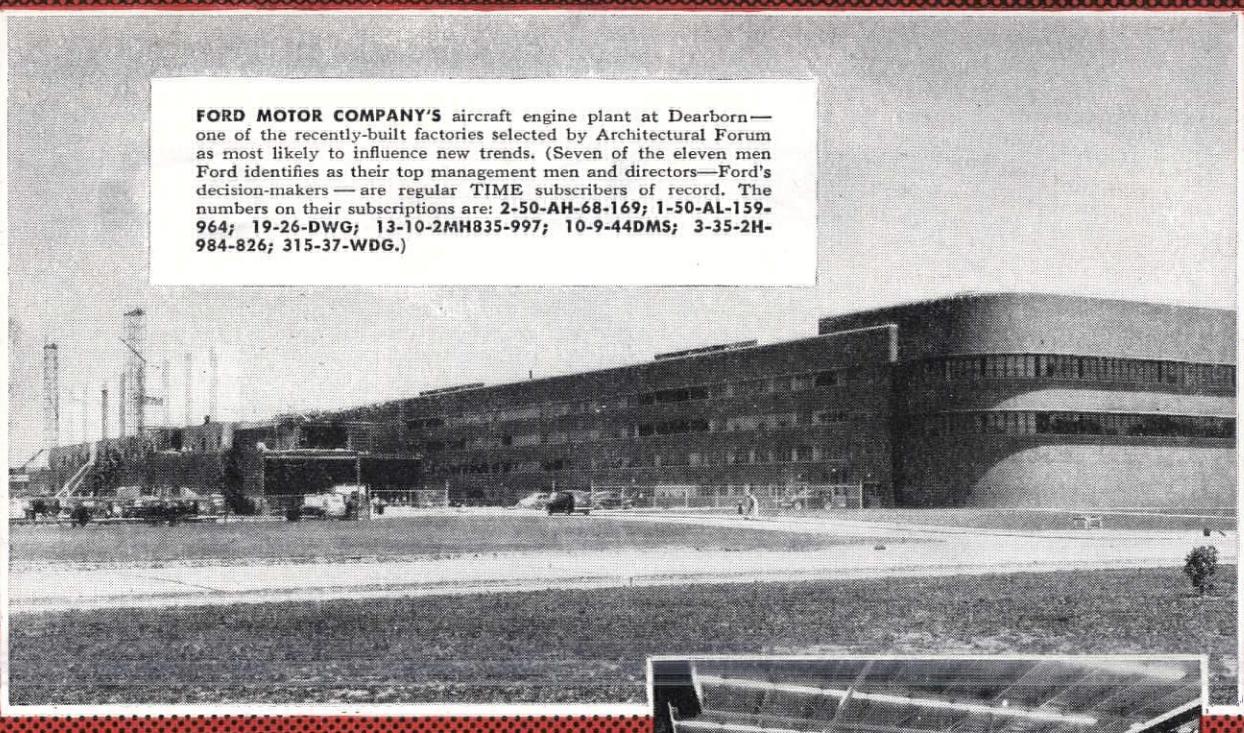
HERE is a ONE-PIECE steel Areawall for basement window wells, accepted as standard and essential and good by *architects, contractors and homeowners* throughout the land. Heavy-gauge steel, unbelievably rigid, hot-dip galvanized AFTER formation. Time and labor-saving. Wherever there's a basement window below ground level, Lux-Right\* Areawalls will give years of meritorious service.

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**SAINT PAUL CORRUGATING CO.**  
South End Wabasha Bridge Dept. AF6 Saint Paul 1, Minn.

# Who are the Men who'll **OK** the Plans for the GREAT NEW PLANTS of Tomorrow?

**FORD MOTOR COMPANY'S** aircraft engine plant at Dearborn—one of the recently-built factories selected by Architectural Forum as most likely to influence new trends. (Seven of the eleven men Ford identifies as their top management men and directors—Ford's decision-makers—are regular **TIME** subscribers of record. The numbers on their subscriptions are: 2-50-AH-68-169; 1-50-AL-159-964; 19-26-DWG; 13-10-2MH835-997; 10-9-44DMS; 3-35-2H-984-826; 315-37-WDG.)



**WHEN YOU BUILD**, you build from the ground up—but when you want to sell new building plans and specifications, you start from the top down.

For in any organization, there is a group of higher-up men who must be impressed, convinced, satisfied, sold—before final approval goes through.

Isn't it important, then, to know that you can find on one subscription list of one magazine almost exactly half of all the officers, directors and key executives of 588 of America's best known corporations? And that these top men vote this magazine—**TIME**—their favorite over any other that they read?\*



{\* During the first six months of 1945, **TIME** carried more advertising of industrial building supplies and equipment than any other magazine}

TO THE BUILDING MARKET

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*Dipped in  
Molten Zinc*  
FOR THE UTMOST IN  
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## **Hot-Dip Galvanized for Longer Life and Longer Uninterrupted Service**

Time—unrelenting proving ground for quality—firmly establishes that there is no satisfactory substitute for molten zinc as a rust and corrosive preventive. Hundreds of thousands of actual case histories provide evidence that iron and steel, exposed to the ravages of rust, will last far beyond normal expectancy, render longer life and greater uninterrupted service, and save expensive replacement and maintenance costs when hot-dip galvanized by the American Hot Dip Galvanizers' Methods.

The members of this Association have

established, and are pledged to follow consistently the highest standards in the Hot-Dip Galvanizing process.

The services and facilities of this Association are at your disposal. There is a member of this organization located near who will gladly discuss with you any galvanizing problems.

For any specific information write direct to: American Hot Dip Galvanizers Association, Inc., First National Bank Building, Pittsburgh (22), Pennsylvania.



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use* **hot-dip GALVANIZING**

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Pittsburgh 22, Pa.

## LETTERS



### • Stop worrying about that FOOD SERVICE PLAN!!

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Then we will design the equipment to fit your client's needs—build every unit for years of low cost, heavy duty service—install the job and supervise the related work of other crafts.

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*Send us your inquiries*

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#### LETTER FROM TRINIDAD

##### Forum:

Trinidad is an island adjoining the north coast of South America and forming with it the Gulf of Paria, into which flows the Orinoco.

The culture of Trinidad consists of many nationalities and races. When our armed forces first began to arrive here in 1941, they found an island which had been discovered at an early date by the Spaniards, built up commercially through French industry and finally consolidated politically by the English, who made it their first Crown Colony.

The Negroes and East Indians, originally brought to the island to work the plantations, today constitute two-thirds of the inhabitants and give to the island those particular qualities of native culture and tradition which differentiate it from any other island in this hemisphere.

Native architecture is the product of environment, climate and local materials and is simple and straightforward in expression. The native house is either a small, wood structure with gable ended roof, built high on stone stilts, or it is built of interwoven split-roseau, or wild cane screens covered with mud.

The "Tapia" house derives its name from the grass used as a binder in the clay walls. Studs are set about two feet apart with horizontal staves at about the same intervals and the whole framework is then filled with "Tapia" reinforced mud, smoothed off and allowed to dry. Holes are punched in the clay to allow it to dry evenly.

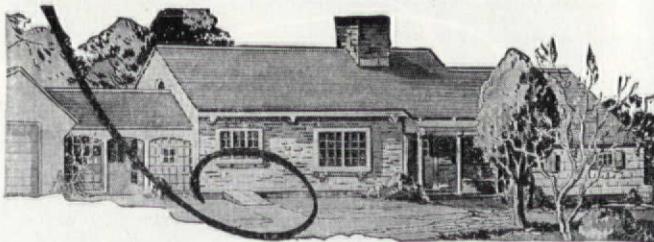
Roofing usually consists of "Carat" leaves, applied like shingles to lath and held in place by wood trestles hooked over the ridge pole, or of real straw thatching. The corrugated tin roof has largely superseded these roof types in the city but they still hold their own in the country.

Port of Spain is the capital of Trinidad and the only city on the island. Any study of the architecture of Port of Spain begins roughly speaking, with the period after the great fire of 1808, which destroyed three-fourths of the city. Before the fire the city must have presented a fairly uniform appearance, as French and Spanish architecture usually strove for unity of effect; this may be seen in the block-long rows of tenements with shops on the corner sites, the smooth, bare walls, fish-scale tile roofs of reddish hue and full-length shuttered windows.

The arrival of Governor Ralph Woodford in Trinidad, in the year 1813, was an important event in the history of the colony. He immediately instituted building laws

(Continued on page 60)

## A MARK OF QUALITY



### in home cellar construction

If you want the convenience and safety of an accessible cellar . . . If you want a leak-proof, burglar-proof, termite-proof and permanently trouble-free cellar door which will always be a source of satisfaction to you . . . buy

**BILCO**

COPPER STEEL

### BULKHEAD DOORS

A Sound and Sensible Investment  
ASK YOUR DEALER or write

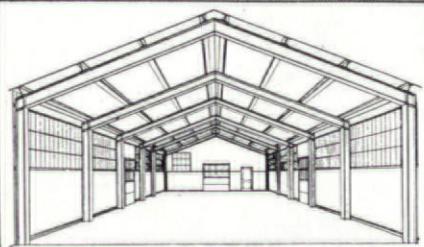
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SIDEWALK AND BULKHEAD DOORS • STEEL ROOF SCUTTLES



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SAFETY  
CATCH

TO FIT  
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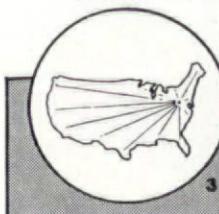
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### STANDARD BUILDINGS

These units, featuring rigid frame construction and interlocking sheeting, are predesigned in units of length, width and height—adaptable to any industrial building program.

NATIONAL RigidSteel Standard Buildings have clear interior space and clear headroom—no beams or roof supports to take up valuable space. They are economical in foundations, erection, maintenance—definitely leaders in the standard prefabricated industrial building field.

Let NATIONAL show you!



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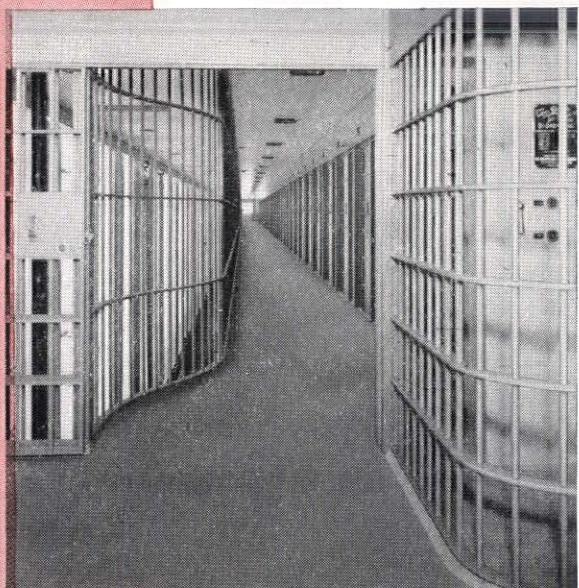
313 Sixth Avenue • Pittsburgh 22, Pa.

*Architects and  
Builders are  
Invited to Consult*



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Construction and Equipment**



THE Van Dorn organization has a wealth of authentic information on modern prison design and construction. Van Dorn has helped plan and produce more prison projects than any other organization in America.

Van Dorn has pioneered in the development of prison equipment and accessories. Its extensive manufacturing facilities occupy more than 460,000 square feet.

Van Dorn's erection method's are modern and efficient.

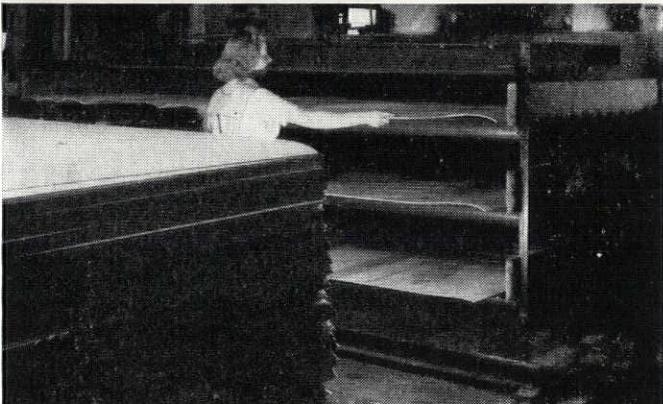
**THE VAN DORN IRON WORKS CO.**

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**whose responsibility?**

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THERE'S not one — but two good reasons why responsibility for the product is never a question when you specify RODDISCRAFT Doors and Wainscoting. You see the first in these pictures of actual Roddis timber tract and veneer mill operations. From timber tract to building site it's exclusively Roddis.

You see the second in the reproduction of the RODDISCRAFT Guarantee Bond — unqualifiedly guaranteeing materials and workmanship.

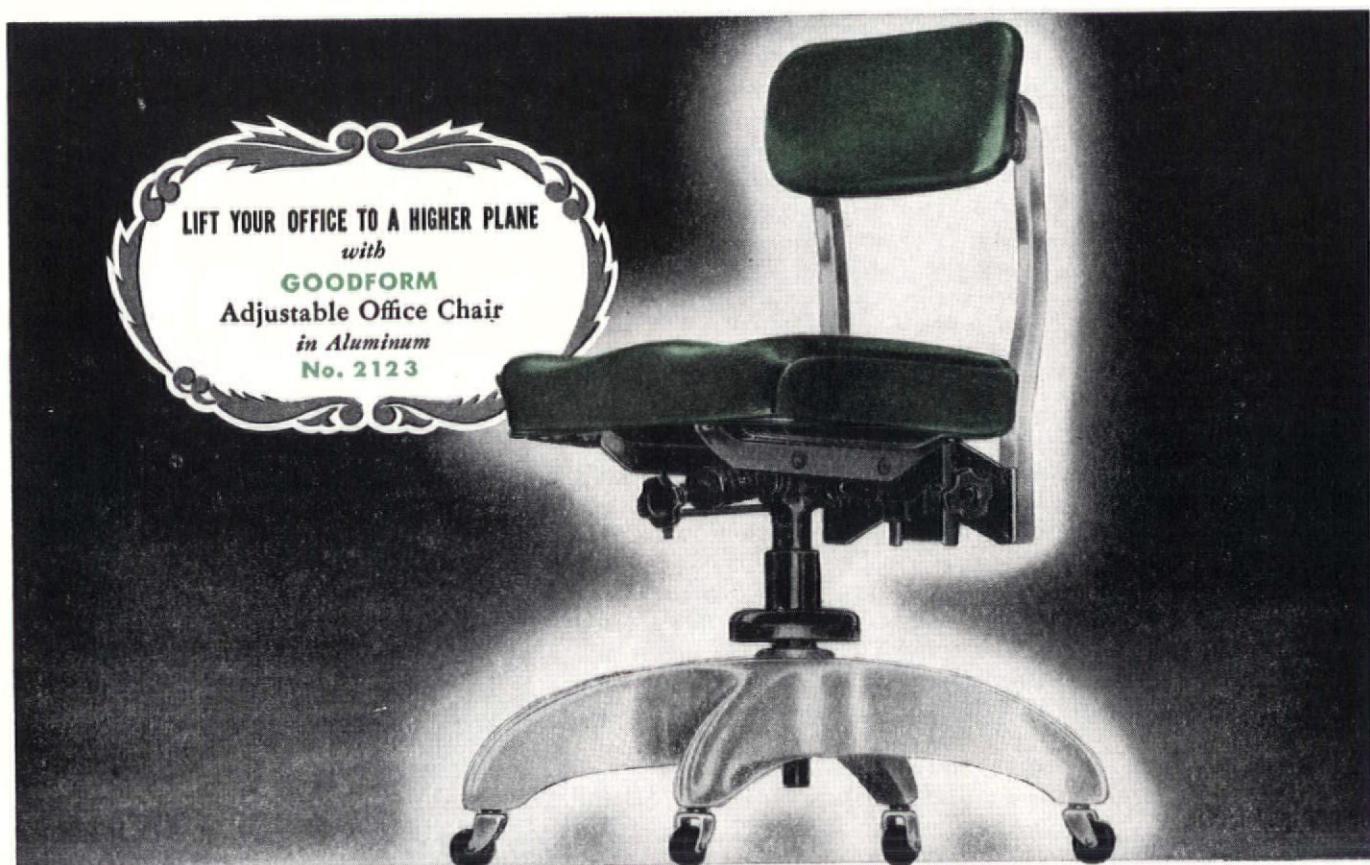
Roddis control and guarantee is particularly important today, with the critical shortage in building materials. They are insurance against the temptation to sacrifice quality in the interests of quantity. For more than half a century, Roddis has stood on quality—that policy still is paramount. And our control is our guarantee to ourselves that quality is right — our bond is our guarantee to you.

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GOODFORM Chair No. 2123 is designed to fit the active working requirements of secretary and typist. It provides greater working comfort than any comparable office chair on the market. It is constructed of extraordinarily durable, lightweight welded aluminum, with comfortable foam rubber cushioning on seat and back rest. It is guaranteed for 10 years and will not split, splinter, warp nor develop rough edges to

tear hosiery or clothing. There is no better investment in office seating than a Goodform Aluminum Chair. Available NOW at G-F Dealers and Branches. Write for catalog.



THE GENERAL FIREPROOFING CO.  
YOUNGSTOWN 1, OHIO

## LETTERS

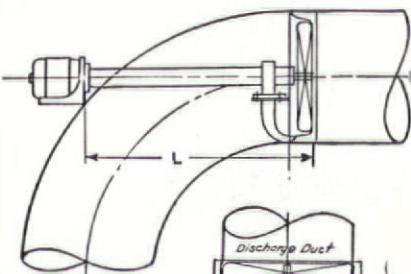
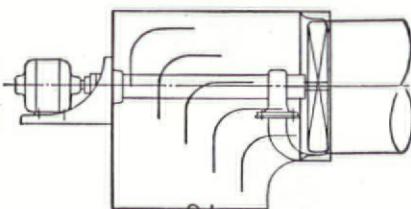
# What Could be Simpler?

Extended-Shaft Fans  
Make Tough Jobs  
QUICK, EASY!



Propellers Have  
2 to 12 Blades

For those many air-moving jobs where motors must not, or should not, operate *within* the air stream, Propellair extended-shaft *airfoil* fans offer quick and easy solutions to otherwise difficult problems. They are compact, trouble-free, easy to install, remarkably *efficient*.



(Top) In an abrupt right-angle turn. "Splitters" keep resistance loss low.

(Center) In duct elbow. "L" dimension: 19½" to 64" according to fan diameter.

(Bottom) This "Y" arrangement eliminates offsets, elbows. Fan sizes: 12" to 60".

Get all the facts on these and other Propellair fans for industrial ventilation. Types and sizes for every service, all with modern *airfoil* blades. Ask us, today, for Catalog No. 10-AF.

"MOVING AIR IS OUR BUSINESS"

**PROPELLAIR**  
INC.  
SPRINGFIELD · OHIO

intended to prevent further outbreaks of fire, looked into the building of the new jail, laid out new parks throughout the city; with the aid and advice of the German botanist, Baron Schack, started the construction of many of the outstanding buildings and repaved the city streets.

One of the handsomest groups of buildings in the West Indies is the Saint James Barracks, begun in 1824 and completed in 1827, under Governor Woodford. It was reputedly built after plans sent out from the War Office and the elegant Regency in which it was executed could hardly have come from the hand of a native architect at this period. The cast-iron columns and bricks, of which it is built, are said to have been sent out from England in ballast while sugar-cane would make the return voyage.

Buildings of note after Woodford's time are few and far between and it was not until the 1850's that anything worthy of especial comment was erected. At this date, L. W. Samuel, a native architect, making the most of limited building materials, designed the Colonial Hospital and succeeded in constructing an imposing classical building almost entirely of brick.

The 1870's saw the construction of the Constabulary Headquarters and Government house, both by English architects. J. L. Pearson, R. A., designed the Constabulary Headquarters in colorful Venetian Gothic making good use of the arcaded galleries in a tropical climate. The building shows the hand of an accomplished master and contributes much to the dignity of the city.

Government House was designed by Ferguson and is a fine example of Victorian architecture at its best, where Italian loggias have been freely combined with the best contemporary detail. The formal gardens provide a perfect setting for this massive pile and it is surrounded by the famous Trinidad Botanical Gardens.

The rich pre-war years of the early 1900's, saw the construction of the mansions along the Maraval Road in Port of Spain and bordering the Queen's Park Savannah, a 170 acre park. This is really the 5th Ave. of Trinidad, where Scotch Baronial vies with a pastel-tinted villa of the French Second Empire. The Roman Catholic Archbishop found a polychrome Romanesque to his taste while a rich planter indulged in a Moorish extravaganza in white.

Today the trend is up the fashionable Maraval Valley, where architects, P. P. Collins and Lourenco have struck a new note with their modern West Indian bungalows and with a few really fine modern structures such as "Kent House", a resi-

(Continued on page 64)

FINE FINISHES

SINCE 1875

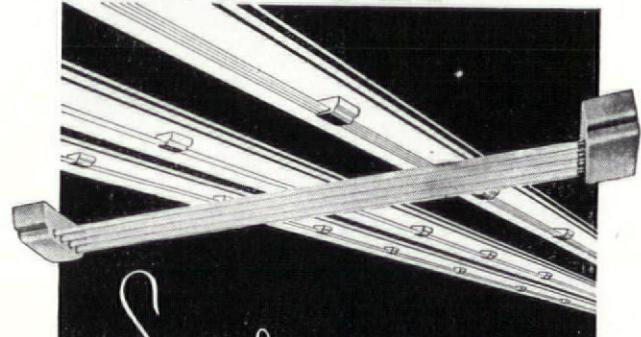
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for every purpose—for those who want the best

*They Look Better Longer*

See Sweet's for complete information on all O'Brien paints. O'BRIEN VARNISH COMPANY, SOUTH BEND 21, INDIANA.

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*Simplicity*

*Cold Cathode* *Low Voltage*

Long continuous lines of light, possessing all the recognized advantages of Colovolt Cold Cathode Fluorescent illumination, come to you in these "Simplicity" assemblies. Distinctive in design—easy to install—simple to maintain—no gingerbread attachments—no dust collecting areas—"Simplicity" units give balanced illumination with comfortable, easy-to-look-at light for every commercial installation. Units available to make individual 8 foot fixtures or continuous line lighting in multiples of 8 feet. Colovolt 93" 10,000 hour lamps (1) are guaranteed for 1 full year except for failure due to breakage, (2) require no starters—do not flicker, (3) are practically free of intermediate burn outs.

Contact your electrical wholesaler or jobber, or write us for full details and prices.

\* Trade mark registered U. S. Pat. Off.



**GENERAL LUMINESCENT CORPORATION**  
662 So. Federal St. CHICAGO 5, ILL.

Now your clients again can get Servels—

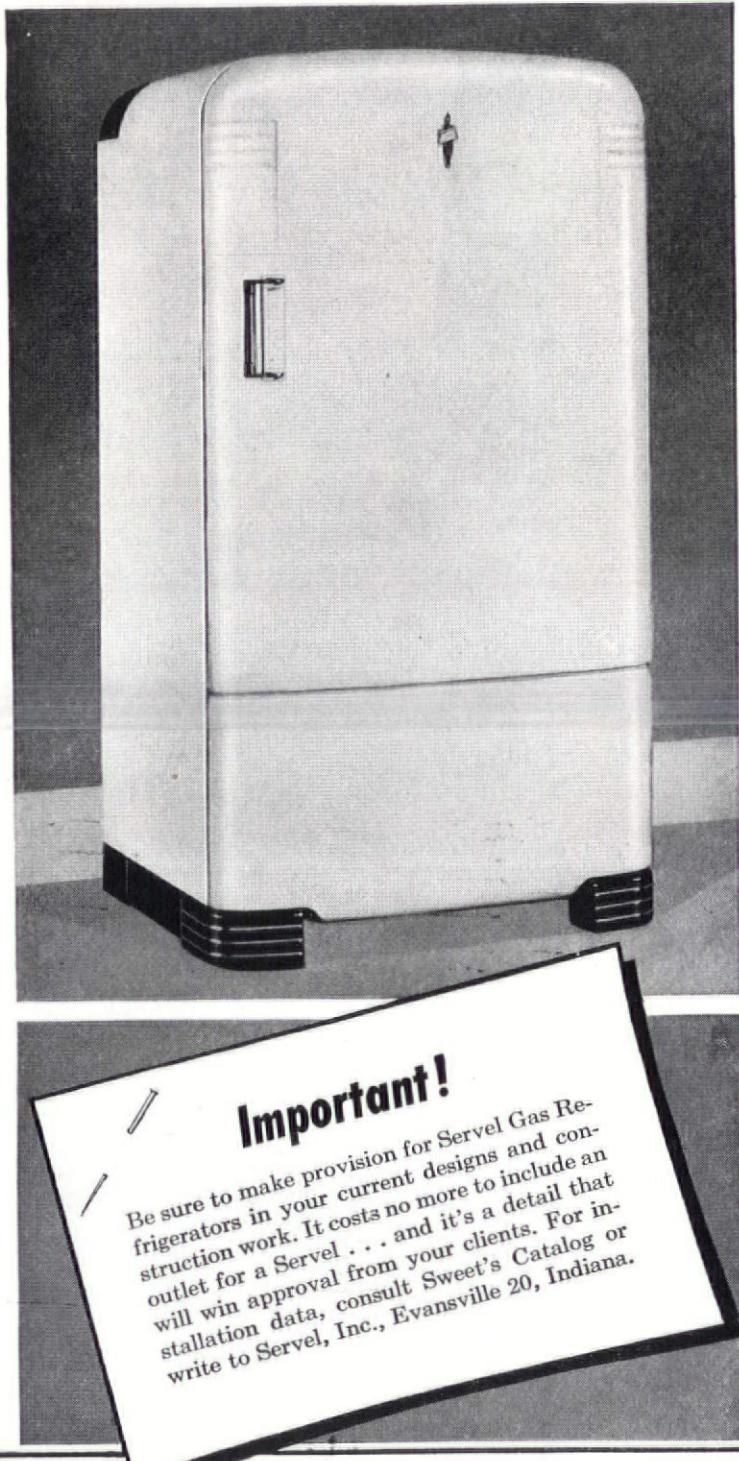
**Silent . . .  
long-lasting  
Gas Refrigerators**

YES, the new Servel Gas Refrigerator is today rolling off the line. And soon the new homes and apartment houses you design and build can once more have the noise-free, trouble-free refrigerator that so dramatically demonstrated its dependability during the war years.

You'll find that homeowners who had experience with noisy, troublesome mechanical refrigerators today want a Servel. For it's the only automatic refrigerator that freezes *with no moving parts*.

A tiny gas flame does all the work in a Servel. It circulates the refrigerant that produces constant cold and sparkling cubes of ice. This simplicity of operation is the secret of Servel's famous silence . . . and the secret of its longer life, too. With no moving parts, there's nothing in the freezing system to get noisy, wear or need fixing.

For complete information on the new Servel Gas Refrigerators, write today to Servel, Inc., Evansville 20, Indiana. Or see your local gas company.

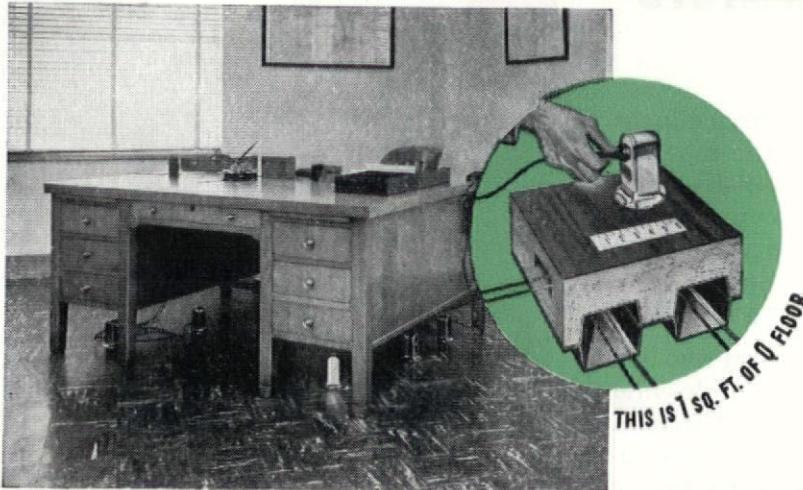


STAYS SILENT LASTS LONGER

**Servel** GAS REFRIGERATOR

# Commercial National Bank

built with **Q-FLOORS**

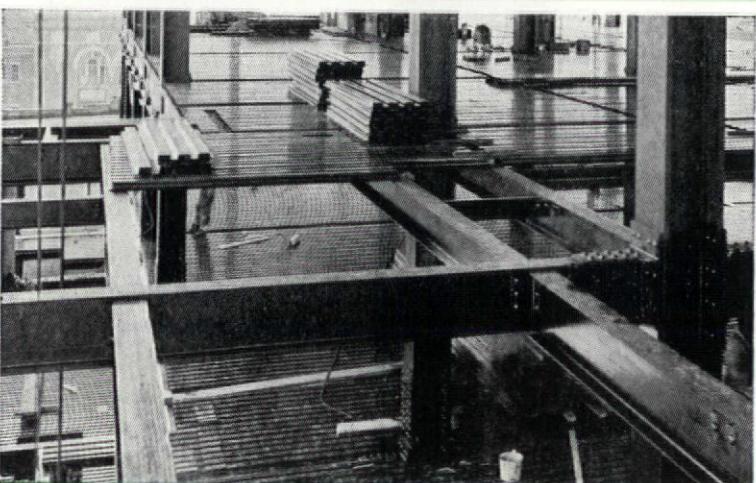


The architects—McKim, Mead & White and  
\*Samuel G. Wiener could cope with

*Tenants' frequent  
floor layout changes*

In any building it is impossible to know advance exactly where all the electric outlets will be wanted. Q-Floors remove the need of trying to plan for the unpredictable.

Q-Floors are so constructed that a



And James Stewart & Co., contractors, could have

*Floors up almost  
as fast as the frame*

Speedier construction is another Q-Floor feature that all clients appreciate immediately. Because Q-Floors can be laid at a rate of 32 sq. ft. in 30 seconds by two men, they greatly speed up building. Furthermore, they become an immediate working platform for all other trades, noncombustible, clean, dry and uncluttered with no forms or shoring to cause delay and accident. Q-Floor constructi

THE EASIEST THING FOR A BUILDER TO FORGET..

*Floors are what a building is for!*

H. H. ROBERTSON CO.



2403 Farmers Bank Building  
Pittsburgh 22, Pennsylvania

Offices in 49 Principal Cities  
World-Wide Building Service

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because..

inch area can be tapped for power. In simplified terms, Q-Floors are steel cells passed over by raceways. It takes only a few minutes for an electrician to drill a small hole and install an outlet—anywhere, any time—without digging trenches.

This electrical availability over the entire floor permits continuous change of floor layout from the day the tenants move in, to the day electricity bows out of civilization.

Previous advertisements showing the Commercial National Building omitted by error the name of Samuel G. Wiener.

ually reduces over-all building time from 20 to 30%, as proved by thousands of Robertson installations. Time saved is easily interpreted by your client as money saved on building expense or as revenue earned by earlier rentals.

When it comes to cost, there are several other factors in favor of Q-Floor. Any Robertson representative can show you that cost is right in line, despite the unique advantages which are worthy of premium price.

For Q-Floor literature, write the H. H. Robertson Co. To see Q-Floor Fittings, call any General Electric Construction Materials distributor.



• FLOORS

## LETTERS



# Civilian Fliers Prefer TURF

Sound resilient sod that resists wear. Reduces impact. Saves tires.

Turf establishment and maintenance are now a science. Write for our new series of practical bulletins on Turf construction and upkeep, now available.

**WOODRUFF**  
E. H. & SONS INC.  
Milford, Connecticut • Toledo, O.

dential hotel in the International style, and a few residences.

Trinidad's architectural future will depend largely on its ability to avoid aping British and American types and in striking out boldly along the lines determined by local conditions and materials.

ALAN BURNHAM, CM 3/c  
Fleet Post Office, New York, N. Y.

### BURMESE REPORT

Forum:

Re: Lt. Marshall's letter in your July issue of the FORUM, I would like to show the marked similarity in the architecture of the Western Carolines and that of the mountainous, jungle tribes of Northern Burma in the region around Myitkyina.

There is the same community plan—dwellings, cook houses, canoe houses (banking the Irrawaddy) and the community houses. As in the Carolines, there is the same peaked roof, stout logs and sand floors.

In these tribal communities, the main council hall is always centrally located and the minor council halls are in outlying areas. In front of the main council hall is always a cleared arena enclosed by a bamboo fence. This arena was used for many various masculine activities and sports. The main event being the annual festival when the tribal chief would prove his worthiness of being chief by beheading a bull with one blow of his knife. If the chief failed in this—the younger men would attempt the feat and the one accomplishing this would be proclaimed as the new chief.

All of the native buildings conform to the same structural principles. These principles are amazingly similar to those described in Marshall's letter. One exception being that these people used knee bracings spliced into the vertical posts. Bamboo was used for the rafters, purlins and ties for the joints. The posts were of age-old and priceless mahogany and teakwood.

These people are very color conscious, and would often decorate the posts and rafters with varied colored, flowing details that were painted with earth pigments. A touch of ornament was added here and there on the posts and ceilings joists by the placement of deer, water buffalo, cow, leopard, panther, and many other animal skulls—replacing the human skulls that hung there not so many years back.

I can only add my thanks that these former head hunters of Burma liked the "White Man", when we fought our way through the sacred paths of their jungles.

DARCEY T. TATUM, JR.

Kunming, China

(Continued on page 68)

EVOLUTIONARY  
IN  
ENGINEERING

REVOLUTIONARY  
IN  
DESIGN

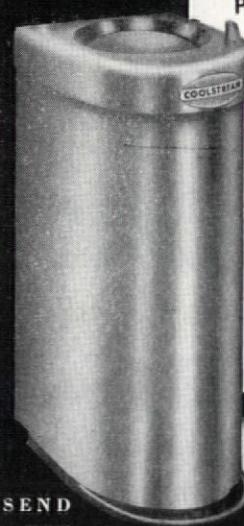
*Announcing*

### THE NEW COOLSTREAM

Pressure-Bubbler & Bottle-Type  
ELECTRIC WATER COOLERS

Superb Engineering  
Distinguished Design  
Maximum Efficiency for  
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COOLSTREAM—the first  
Water Cooler with a one-  
piece stainless steel cabinet  
and a one-piece stainless  
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SEND  
FOR  
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THE COOLSTREAM  
CORPORATION

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100% AUTOMATIC  
FOR GAUGING  
LIQUIDS OF ALL KINDS  
APPROVED BY  
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ARCHITECTS, ENGINEERS  
AND BUILDERS AGREE  
A RELIABLE GAUGE IS  
NECESSARY WHEN  
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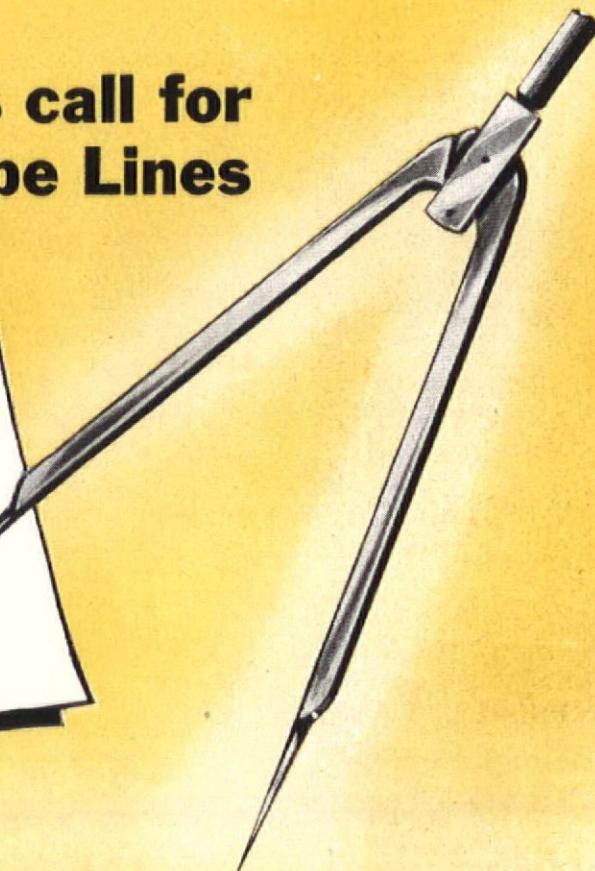
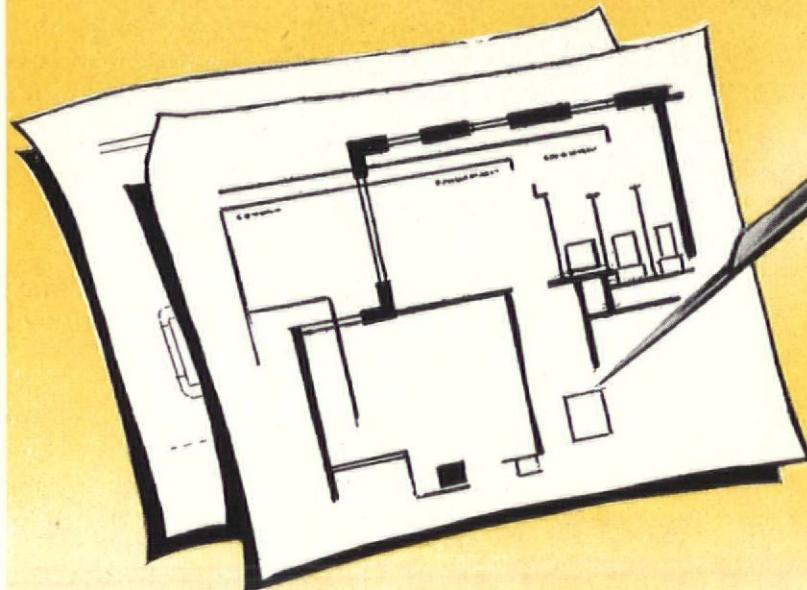
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COMPLETE  
DETAILS

LIQUIDS WORTH STORING  
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THE LIQUIDOMETER CORP.

36-30 SKILLMAN AVE., LONG ISLAND CITY, N. Y.

## Wherever the plans call for Copper or Brass Pipe Lines



### SPECIFY *Silbraz*\* Joints

WITH THE  
SILVER RINGS

#### ECONOMICAL INSURANCE OF CLIENT SATISFACTION

The Silbraz joint — the modern threadless joint for copper and brass pipe or tubing — actually bonds pipe and fitting into a single, "one-piece" unit.

An insert of silver brazing alloy incorporated in the fitting melts under the heat of an oxyacetylene torch and flows out between pipe and fitting to produce a permanent, leakproof bond. The completed joint is easily identified by a fillet of silver brazing alloy which appears at the end of the fitting where the pipe fits into it.

Silbraz joints withstand the severest vibration and shock — even the kind of abuse encountered in diesel locomotives, tanks, and fighting ships on which they are widely and successfully used.

Fittings and valves for making Silbraz joints are produced by leading manufacturers. You can specify them with assurance for all types of buildings — for plumbing and heating lines, fuel, gas and process lines — wherever you want brass or copper pipe lines that can "take it" and give your clients full satisfaction.

\* Reg. U. S. Pat. Off.



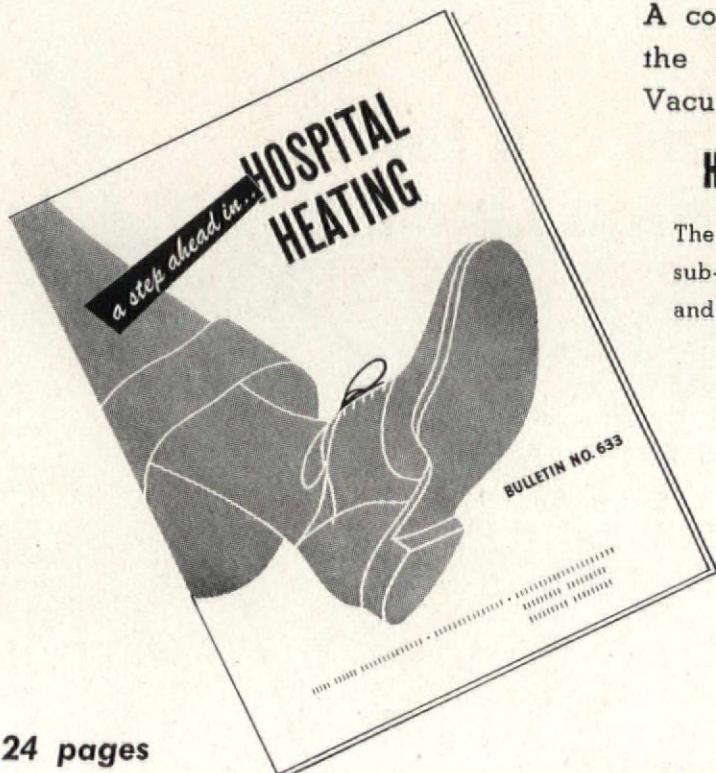
#### AIR REDUCTION

General Offices: 60 EAST 42nd STREET, NEW YORK 17, N.Y.  
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**He's Ready to Fill  
Your Specifications  
for Silbraz Joints**

Better plumbing and heating contractors already have the special Airco oxyacetylene equipment for making Silbraz joints and the "know-how" to do the job. You can rely on them to install "one-piece" Silbraz copper or brass piping systems.



24 pages  
including certified  
records of fuel  
and steam savings

A comprehensive non-technical explanation of the principles of the Dunham Differential Vacuum Steam Heating System, prepared for

## HOSPITAL ADMINISTRATORS

The Dunham System circulates steam under variable sub-atmospheric pressures, variable low temperatures and variable volumes to give dynamically balanced temperature regulation in hospital buildings. Its "Flexible Steam" (automatically controlled) is as practical in remodeling existing systems as in new buildings. Change-overs use existing radiation and piping, only the method of control is changed—not the heating system itself. The booklet will be sent free to any administrator or hospital engineer. A request on your letterhead will be promptly honored without obligation.

**C. A. DUNHAM COMPANY**  
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TORONTO, CAN. LONDON, ENG.



*Your '46 Plans call for  
America's Foremost Fountains!*

Your plans should call for Halsey Taylor Fountains. They're America's foremost, because for years they have embodied every possible factor to promote sanitation and convenience, regardless of the type of structure in which they're installed. Health-safe automatic stream control, practical drinking mound, exclusive hygiene-promoting features!

Get our latest catalog.

THE HALSEY W. TAYLOR CO., WARREN, OHIO

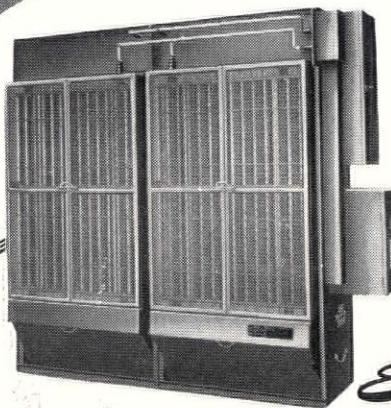
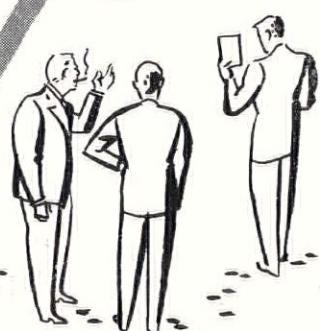
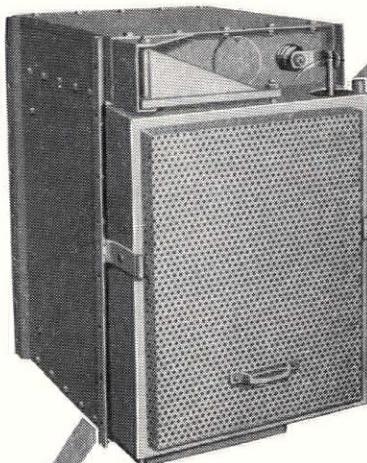


**HALSEY  
TAYLOR**  
DRINKING FOUNTAINS

for the first time . . .

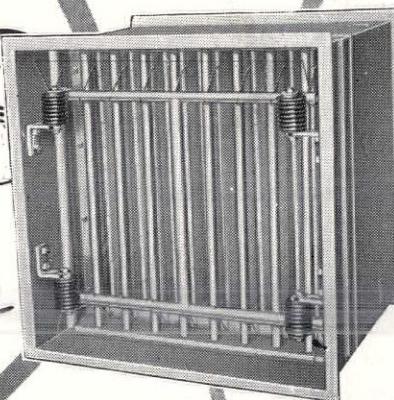
**The Cleanable  
Electro-CELL**

Sectional-type Electronic air filter with removable collector plate assemblies. This feature eliminates need for providing water, oil, compressed air and sewer connections at each installation. Spare collector plate assemblies can be set into place and service continued uninterrupted while dirty plates are being cleaned. Send for Bulletin No. 252.



**Self-Cleaning  
Electro-MATIC**

The completely automatic operation of this Electronic filter answers both the problem of removing the dust and smoke from the air, as well as the secondary problem of disposing of collected material. A continuous curtain of collector plates passes intermittently down the front of the filter and thru a viscous cleaning bath at the bottom. Send for Bulletin No. 250.



**Renewable Media  
Electro-AIRMAT**

This is the only Electronic dry filter on the market. Uses sheets of "charged" airmat paper which are renewed manually or by a mechanical loader. Combines mechanical filtration with Electronic cleaning providing continuous service even thru a period of power failure should it occur. Send for Bulletin No. 253.

**a complete line of *Electronic air filters***

• AAF offers, for the first time, high efficiency air

cleaning in three types of Electronic filters to meet any requirement, either commercial

or industrial, for super-clean air. For the interesting story behind the development

of these filters which are the result of 10 years of research and

experimentation send for the helpful booklet shown below.

**AMERICAN AIR FILTER COMPANY, INC.**

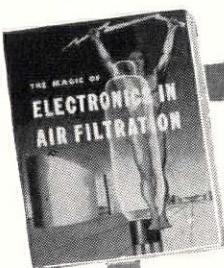
Incorporated

427 Central Avenue, Louisville 8, Kentucky

In Canada: Darling Brothers, Limited, Montreal, P. Q.

**Electronic AIR FILTERS**

FOR EVERY COMMERCIAL AND INDUSTRIAL AIR CLEANING PROBLEM



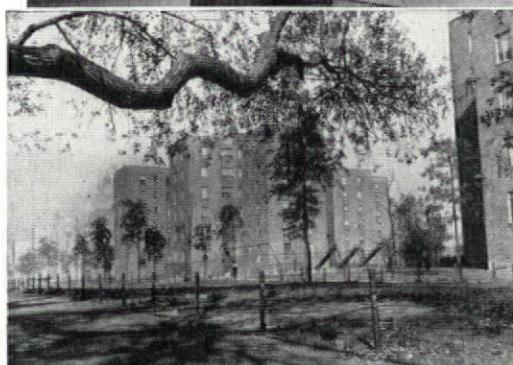
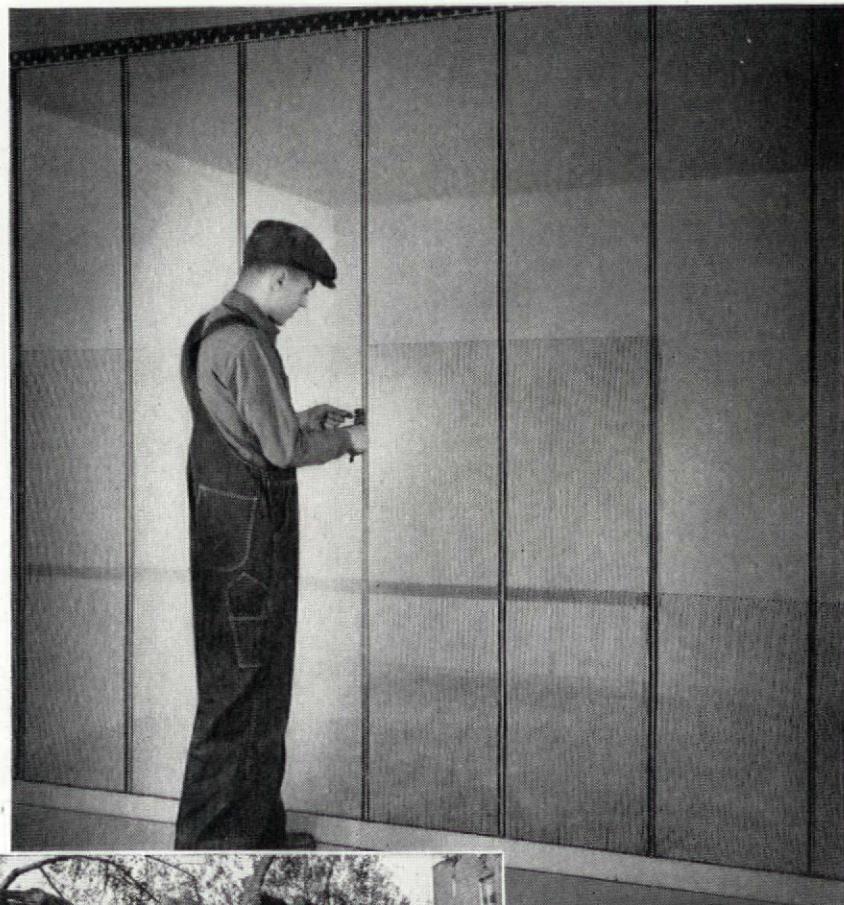
THE MAGIC OF  
ELECTRONICS IN  
AIR FILTRATION  
will be sent  
free on request.  
Write for your  
copy today,  
there's no obligation.

**AAF**

# HE'S SAVING MONEY BY THE YARD!

THIS man is working on one of the nation's greatest building projects—The Red Hook Housing Development in Brooklyn, N. Y. He is installing the famous Gold Bond 2" Solid Partition System instead of the customary 4½" partitions. In so doing, he's saving space, time and materials on each of the 300,000 square yards of these non-bearing partitions used in the project. And he's saving enough space for 260 extra rooms!

Before Gold Bond products were chosen for this mammoth job, they were appraised from every angle. Actual demonstrations proved the practicability of this fireproof system . . . how it saved space without sacrificing structural strength . . . how it cut room-to-room noise . . . how it saved money on installation cost because of exclusive Gold Bond patented features.



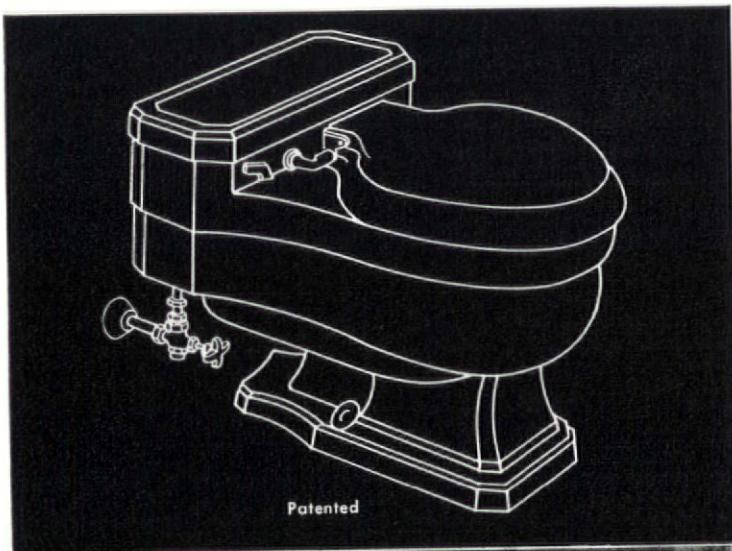
*Above:* Installation of Gold Bond 2" Solid Partition System — showing ceiling runner, studs, metal lath and base. (System also includes Gold Bond Gypsum plaster and finish lime.)

*Left:* One of the 25 six-story apartment houses in the Red Hook Housing Development in Brooklyn, N. Y.

For housing projects, offices, hotels, apartments or hospitals, be sure to consider the outstanding solid partition system in the building industry today—the Gold Bond 2" Solid Partition System! You'll find complete information in our section in Sweet's. For full size detail drawings write Architectural Department, National Gypsum Company, Buffalo 2, N. Y.

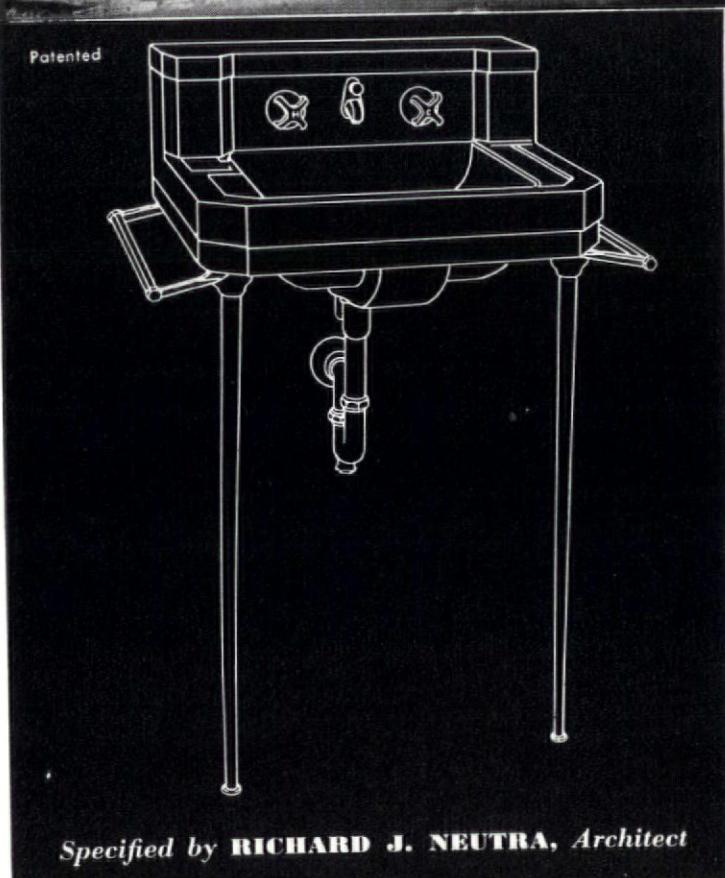
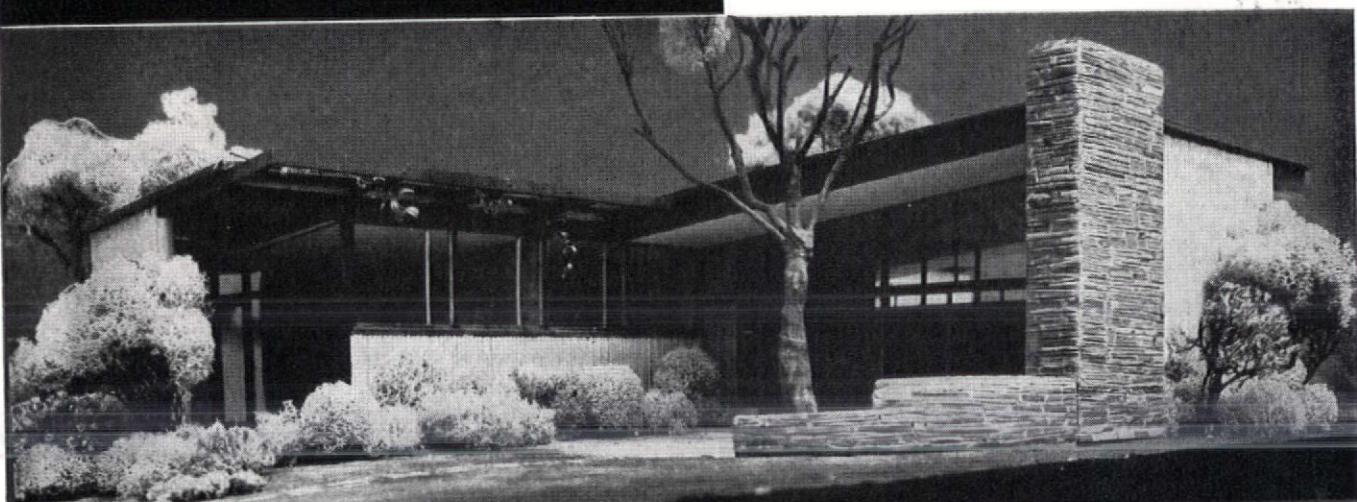
**BUILD BETTER WITH  
GOLD BOND**

LATH • PLASTER • LIME • METAL PRODUCTS • WALL PAINT • INSULATION • SOUND CONTROL • WALLBOARD



# THIS IS C S h #6 case study house

*Sponsored by ARTS & ARCHITECTURE Magazine*



*Specified by RICHARD J. NEUTRA, Architect*

## WITH Case PLUMBING FIXTURES

Architect Richard J. Neutra had ample justification for selecting the Case plumbing fixtures that are going into this interesting building. Their clean design and their proven ability to give long, trouble-free service recommend them to all who are concerned with lasting value. They combine *vitreous china* and fine mechanical construction—primary assurance of cleanliness and health protection in bathroom fixtures. This is the third in the series of "Study Houses" to be Case-equipped. W. A. Case & Son Mfg. Co., Buffalo 3, New York. Founded 1853.

• • •  
**TOP**—Most popular of all water closets is the *Case T/N* Modern in design, quiet in operation, non-overflow and non-siphoning. A precision-built free-standing fixture.

**BOTTOM**—Concealed front overflow, anti-splash rim, chrome finish accessories and convenient shelf are popular features of the *Wilmington* lavatory. Available also wall hung.

## A LETTER FROM THE PUBLISHER

Dear Reader:

One of the most poorly kept secrets of recent months is now in your hands. It would be fascinating to report that **FORUM** editors and the art department approached this event frazzled and unnerved—like a socialite on the eve of her debut. Nothing could be further from the truth. Those fully familiar with the individual neuroses of the staff detected only a quiet, confident gleam. One reason for this unbecoming assurance is that the new, large **FORUM** is for them an old story. Various things conspired to delay its appearance. Meanwhile, many a practice dummy went into the basket. But the editors kept insisting and now they have it.



While we're not much given to reminiscence, this seems an appropriate time to recall that we started "postwar planning" back in 1935. That calls for a disclaimer. We were not looking ahead to a war. But we were looking ahead.

Not long after **TIME, INC.** acquired this magazine Henry Luce wrote a letter staking out the **FORUM**'s position. Said he in part:

*"Concerned as you are with the flow of trade through the vast markets of America, how many magazines can you keep track of? Not many—and yet we believe that you will find it profitable to keep aware of the **FORUM**. In support of this presumption, may I recite a few trite observations?*

*"The automobile is America's stellar industry. This is appropriate since Transportation has been the most exciting and life-transforming division of modern industry.*

*"Nevertheless, over any long period (such as a decade) and in any civilized country (such as the U. S.) two industries are, and will probably always be, both the biggest and the most basic. They are, of course, Food, Shelter. Food being mainly agricultural, that leaves Shelter the biggest industry in most any time and place.*

*"But there is another thing to be said about the building business, viz.—there is no industry which has such an intimate working need for a professional publication; there is no industry which can be so greatly helped by the presence of (or impeded by the absence of) the right publication.*

*... Does the right publication exist? The answer is Yes and No—that is to say, it has begun to exist.*

*"The **FORUM** lays its plans to serve*

*a new building industry; an industry which will at last feel the full force of technological advance; an industry in which finance will no longer be so haphazard and so wasteful.*

*... By the same token, while the architect is changing his view of the industry, other men are rapidly changing their ideas about architecture. Last year, we took an extraordinary step. We actually invited a banker to make a regular habit of reading the **FORUM**. We also invited a realtor. And a contractor. And a manufacturer. And an insurance man. With the unique result that the **FORUM** is now read by men of influence who never before read this publication. How many more businessmen ought to, or will, make the **FORUM** part of their regular mental equipment remains to be seen.*

*To bring together, around the central art and science of architecture, all the major influences which will build the America of the future—that, we believe, will be a publishing achievement of major significance. The trail has been struck."*

HENRY R. LUCE

The prophecy proved a good one. When **TIME INC.** bought the **FORUM** its circulation was 5,841. Today it is touching 50,000, and no longer is that man on the train with a copy of the **FORUM** sure to be an architect. He may, as Mr. Luce anticipated, be a banker or an industrialist or a contractor or a home developer or a department store owner or a movie producer or, in fact, any one of fifty different kinds of people whose livelihood is heavily involved in building.



And although the **FORUM**'s audience has climbed from five to 50,000, we can still ask how many readers the **FORUM** will have a year from today. As building swings into its most responsible and prosperous decade, we suspect the number will increase. At the moment, we are not meeting the demand. Very soon we will reopen our subscription books. Our plans for the magazine are to make it enticing to all people with a major, continuing stake in building. That's quite a lot of people. We hope you, and they, find the **FORUM**—the new, large **FORUM**—quite a lot of magazine.

H. M.



### As important as the Kitchen Range

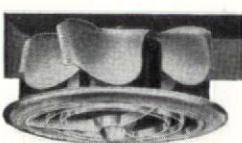
THAT'S what your clients will say about Blo-Fan Ceiling Ventilators.

This powerful small ventilator gets rid of those cooking odors and greasy vapors *right now!* Smoke is captured as it rises and instantly carried off. There's no chance to spread the menus throughout the house—no opportunity for grease to soil walls, ceilings, furnishings.

Blo-Fan is a combination fan and blower. It has the *volume of a breeze fan plus the power of a blower!*

This patented feature, added to the fact that it is installed *directly over the source of foul air*, makes the Blo-Fan doubly efficient.

For a more livable, cleaner, healthier home—specify Blo-Fan Ceiling Ventilators for kitchen, den and bathroom.



**Blo-Fan**

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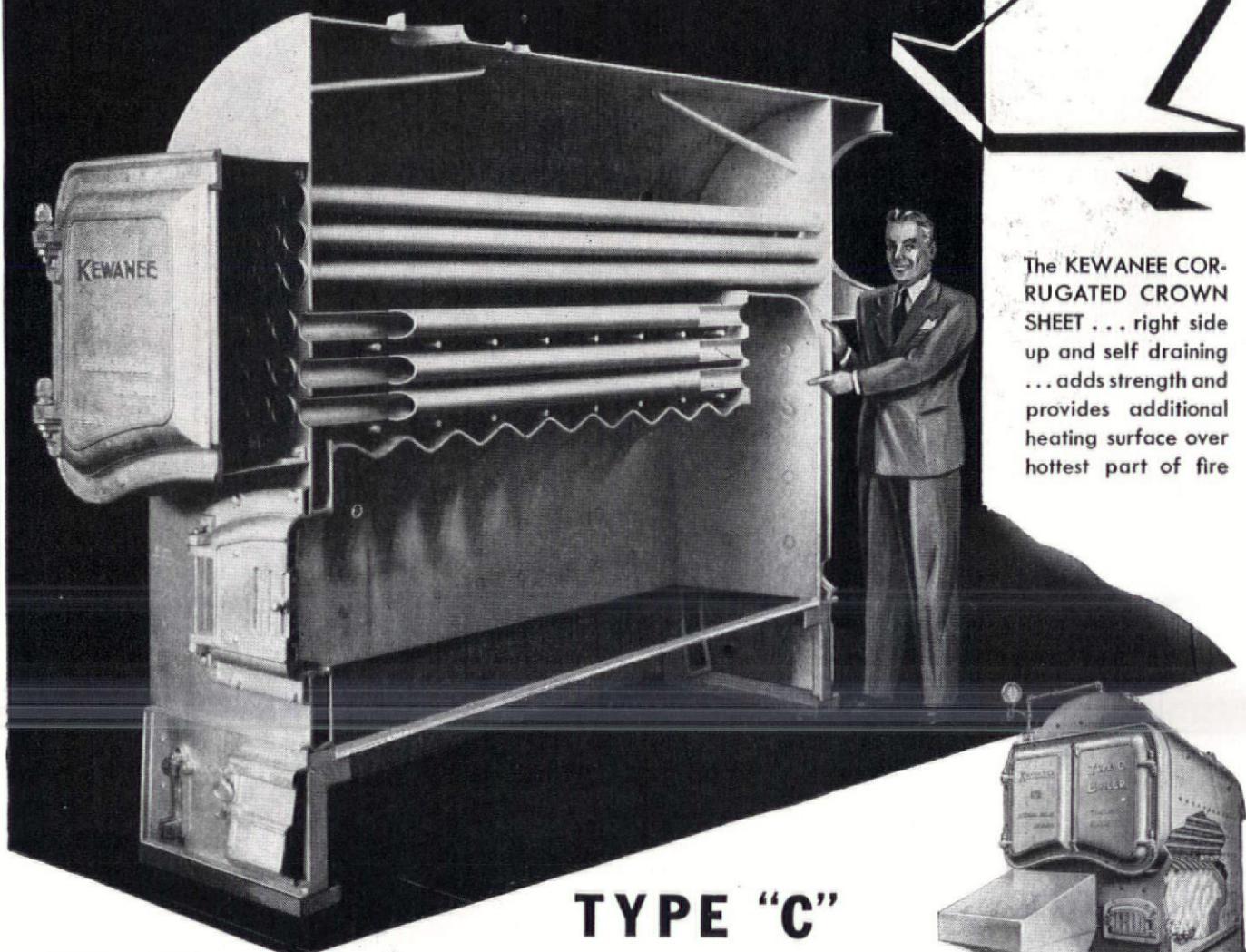
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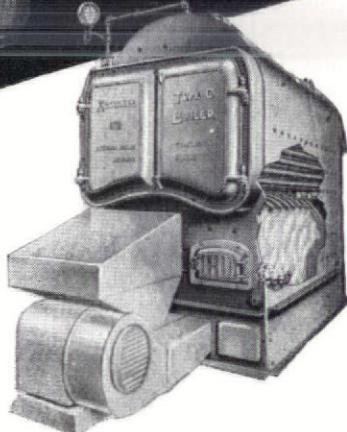
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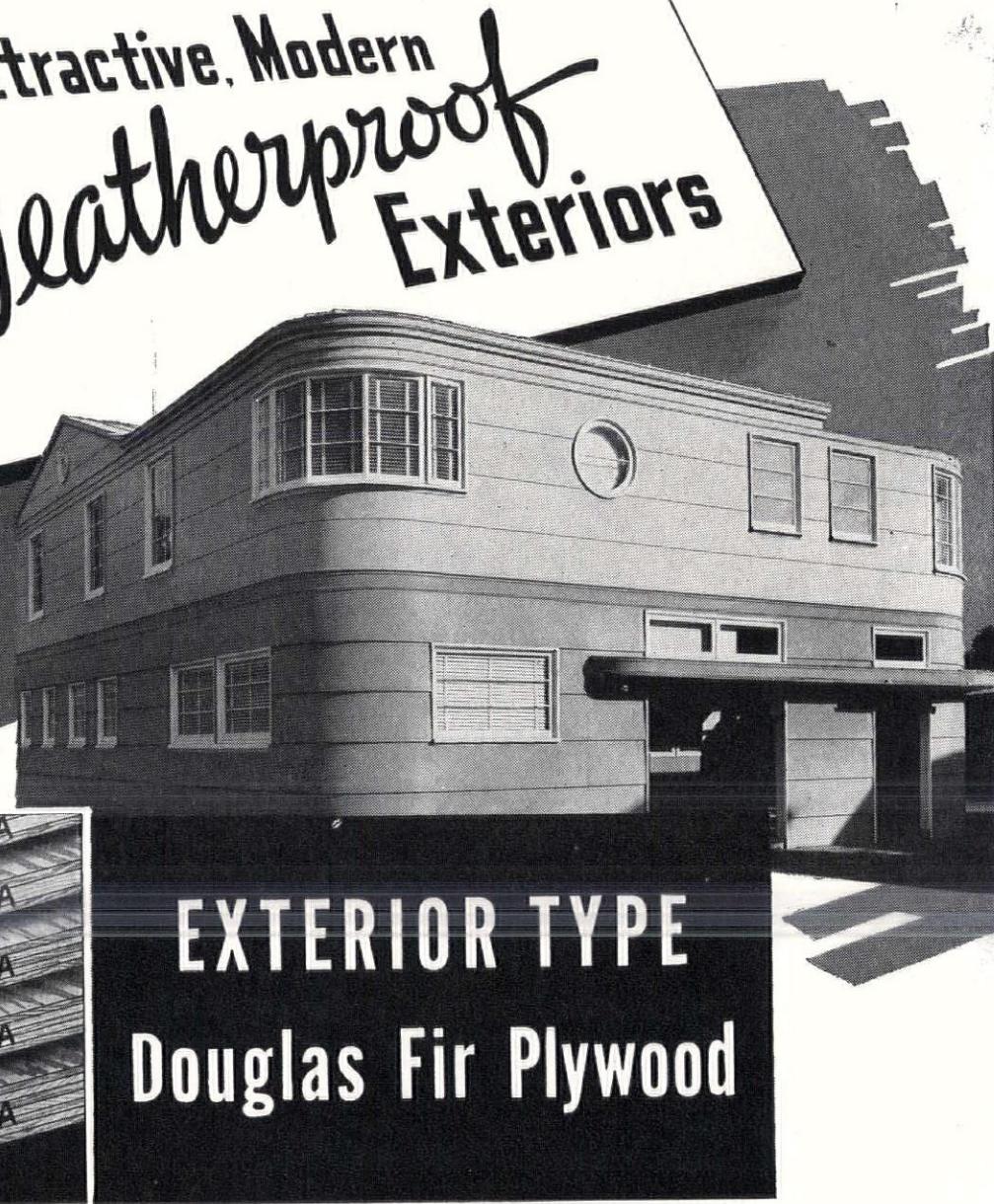
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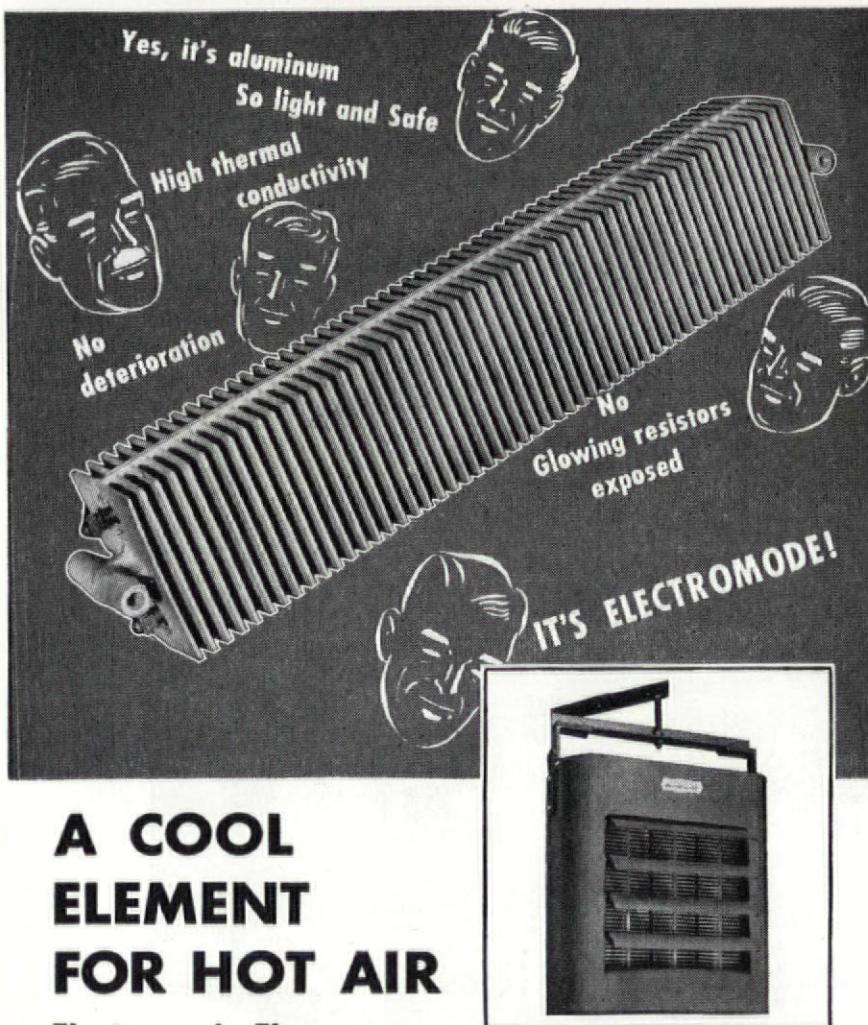
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# ELECTROMODE

## Electric Unit Heaters

For one whose specialty is the glorification of non-objective painting, mercurial Baroness Hilla Rebay, curator of the new Guggenheim Museum, (page 81), is a very objective woman. As import-exporter of non-objective canvases and the men who paint them, she built up "the world's outstanding collection for art patron Simon Guggenheim. Recently, with characteristic purpose, she drafted the world's outstanding architect to design a setting. Among the Kandinsky and Bauer spectrums will hang some canvases done by impresario Rebay, who wields a mean brush herself.

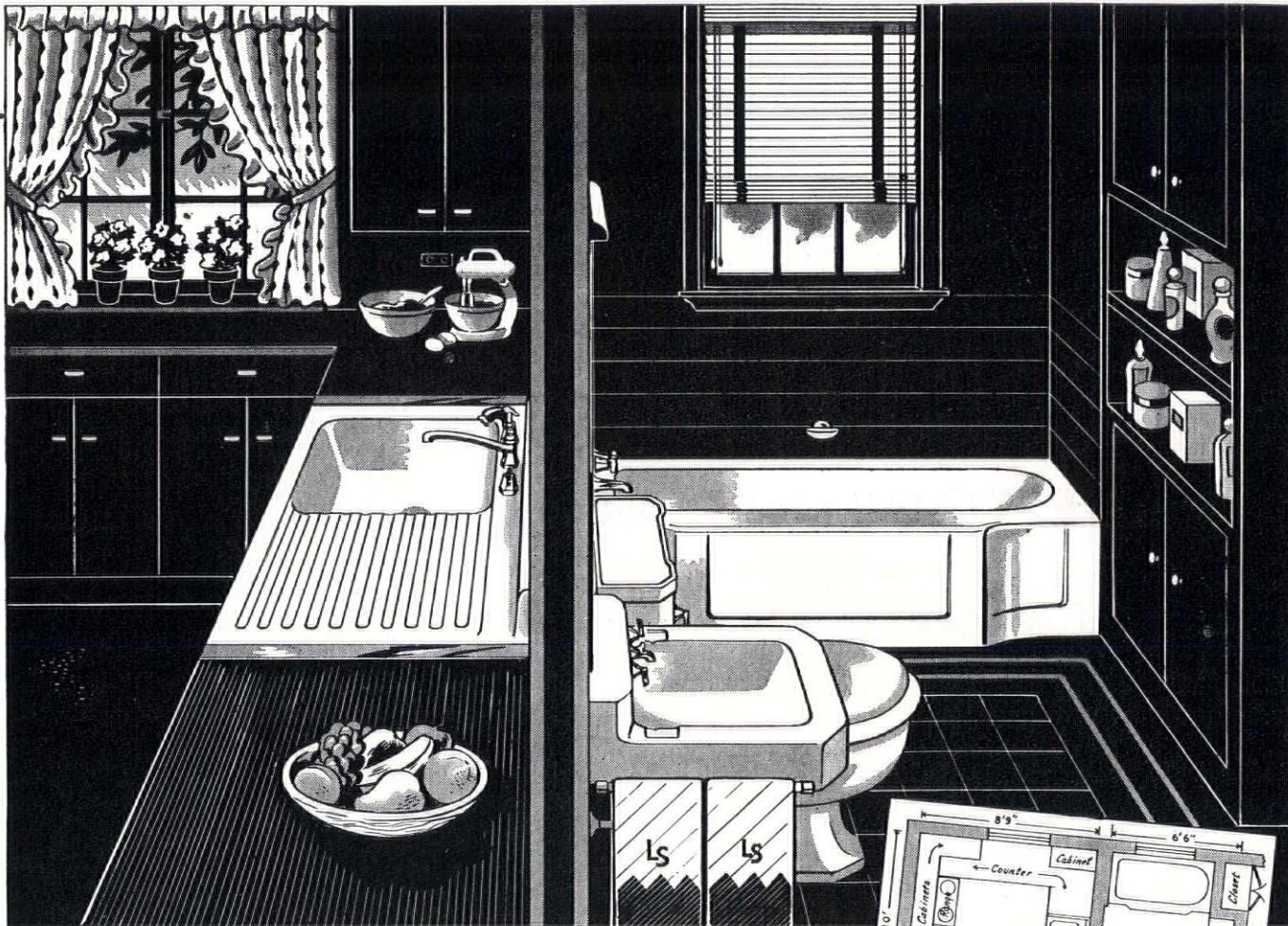
Whoever heard of the carpenters on a job furnishing schnapps and merriment for the builders? Well, here it is. The seven happy founders of Paul Schweikher's cooperative community were a harmonious little group to begin with but the real peak of bliss was achieved only when they discovered that their carpenters were co-op members too. Virtue and fraternity have their rewards. In this case delivered in several gallon jugs, while a well rehearsed carpenter-orchestra furnished cooperative jazz.



Not one to feel dwarfed by ten years' architectural work on the titanic TVA, Mario Bianculli (practically rhymes with Grand Coulee) is now the proud proprietor of his own shiny office in Chattanooga. Nor did it take Senator Norris' dream to awaken Mario to the good things in life. Scion of a Neapolitan family, he duped the Duce by skipping a boat in New York on an exchange scholarship, but after a little experience, architectural and otherwise, he espoused a blonde Tennessean, her native state and the simple life. Proudest of proud Bianculli possessions is their modern hill-billy abode on a slope near Knoxville.

Among the evictees of our acquaintance, designer Raymond Loewy, a man who has words with neither his landlord nor the OPA, is our favorite. He simply believes in living with his work—to the extent of occupying a penthouse above his office from which he was wont to prescribe drafting room formulae for air liners, streamliners and luxury liners to the artisans below. Like a modern sorcerer's, Loewy's present dilemma is the monster of his own concoction. Little by little, as industry encroached upon privacy, he staged one strategic retreat after the other, finally surrendering behind previously prepared positions in the kitchen. Today, in a Waldorf Tower refuge, his erstwhile hearth a battleground of art versus standardization, the chastened Loewy grapples with designs for himself and homeless fellowmen.





## Combining convenience with economy in low-cost homes

THIS practical, Kohler-equipped, "back-to-back" arrangement of kitchen and bathroom has advantages that will appeal to many who plan to build low-cost, one-story homes—and to many who wish to improve existing arrangements by remodeling.

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*Illustrated in Kitchen: Cymbria Sink.*

*Illustrated in Bathroom: Cosmopolitan Bench Bath, Hampton Lavatory, Wellworth Closet.*



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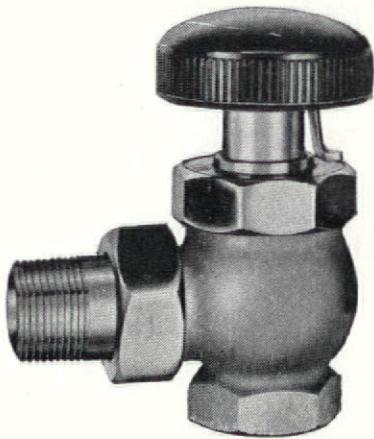
# KOHLER OF KOHLER

PLUMBING FIXTURES AND FITTINGS • HEATING EQUIPMENT • ELECTRIC PLANTS

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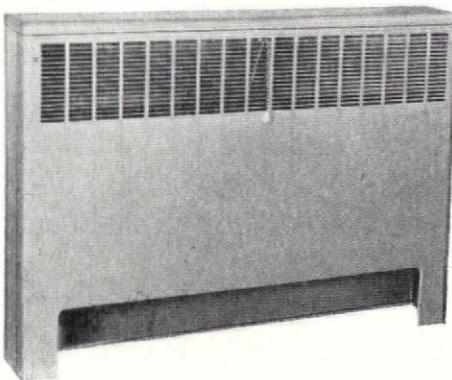
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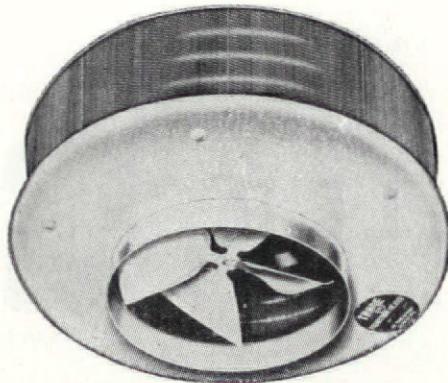
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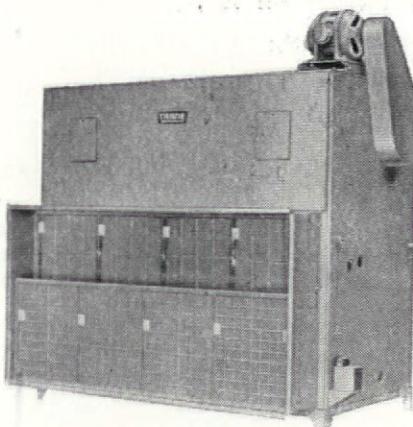
**TRANE CONVECTOR-RADIATORS**

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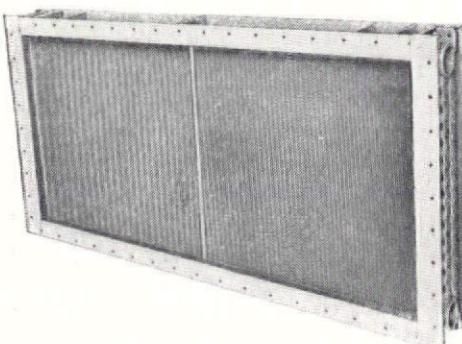
Three distinct types that form the most complete and largest selling line in the industry. Led by the Projection Heater, developed originally by Trane.



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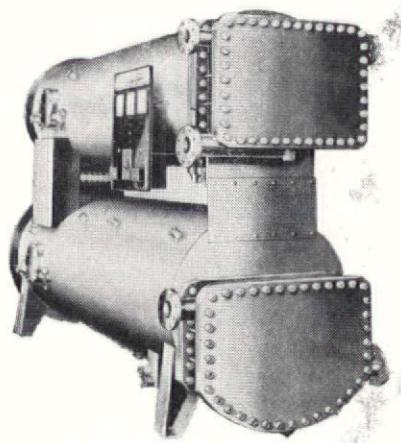
Better known as Climate Changers for complete air conditioning or any of its phases. Use it with steam, water, direct expansion refrigerants.

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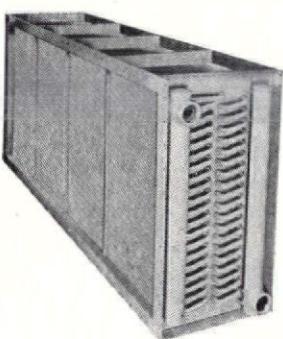
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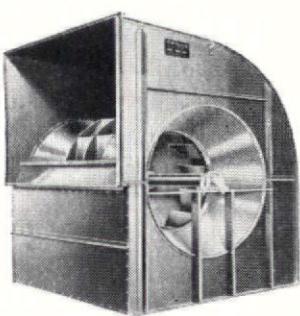
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... as in a school  
without noise control

AMAZING as this may seem, acoustical authorities know how true it is when they measure the loudness of noises originating in many parts of a school . . . disturbing noises that reverberate into classrooms and study halls, interfering with concentration.

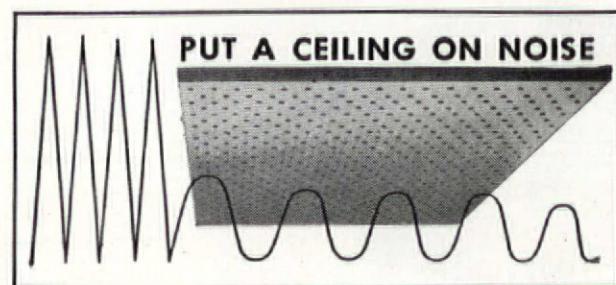
**That's why schools need noise control** in the "noise centers" . . . in the corridors, gymnasiums, assembly halls, cafeterias, vocational rooms . . . yes, even in the classrooms themselves.

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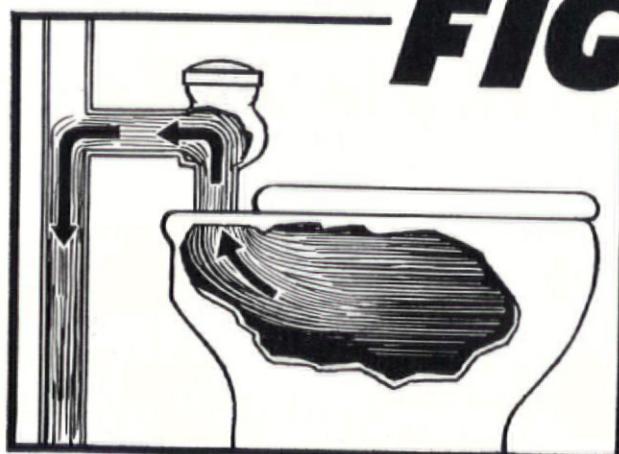
are fireproof, attractive in appearance, economical to install. They are easily kept spotless . . . can be painted and repainted if desired, without loss of acoustical efficiency.

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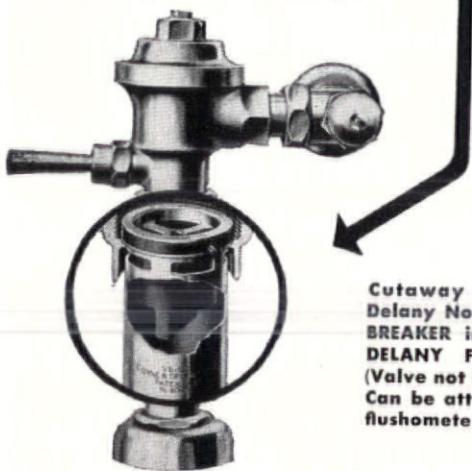


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BREAKER installed in a  
DELANY FLUSH VALVE  
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Can be attached to any  
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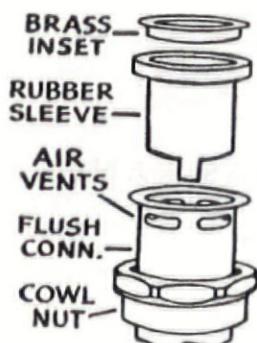
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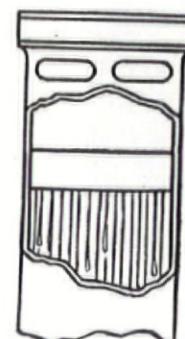
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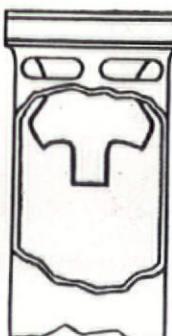


SIMPLEST  
ASSEMBLY  
—ONLY  
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INVISIBLE  
WHEN  
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Drawings show  
cross section of  
the No. 50 in  
operation. The  
unit, upon ap-  
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ber sleeve, seals  
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of the fixture.

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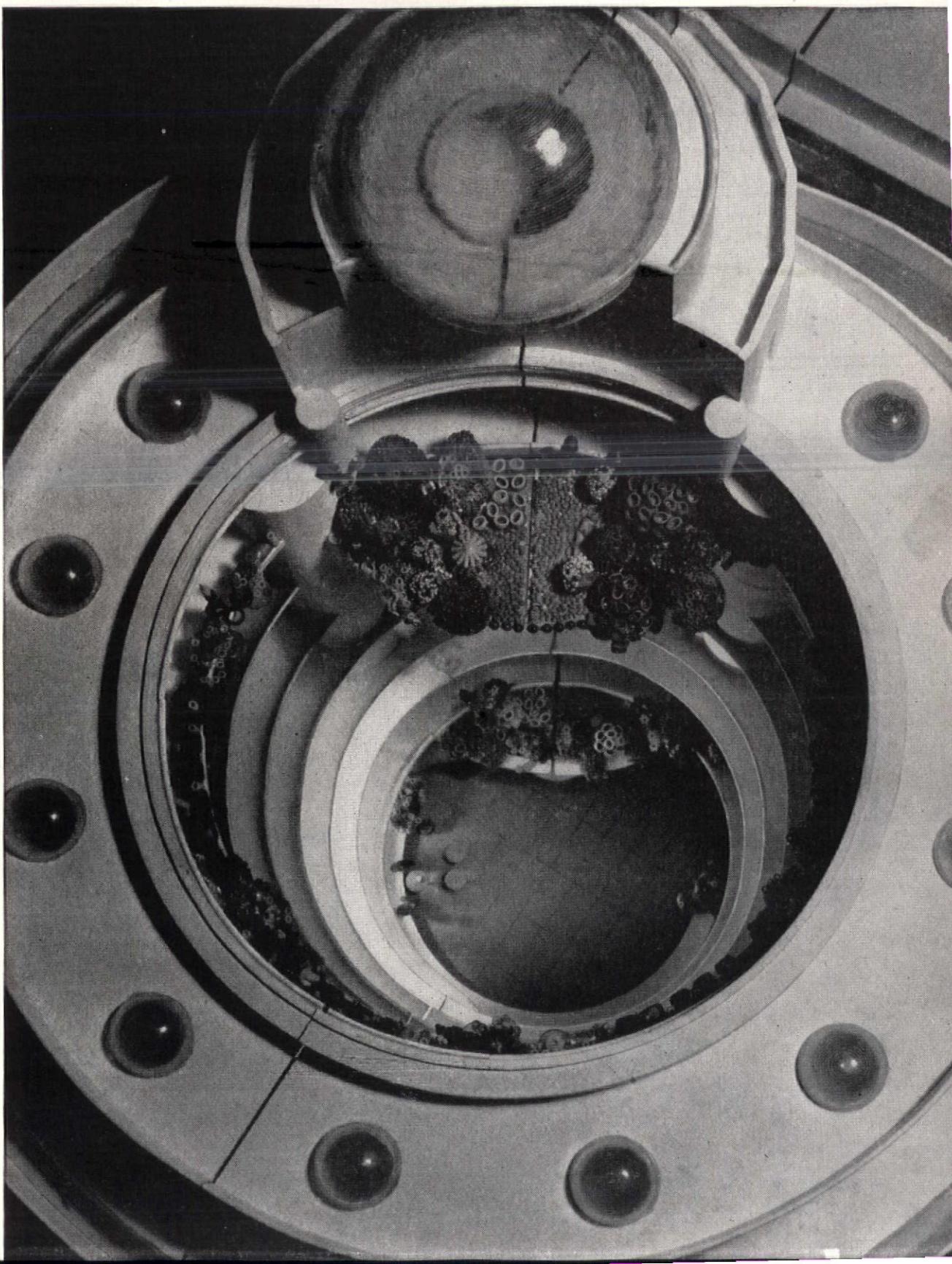


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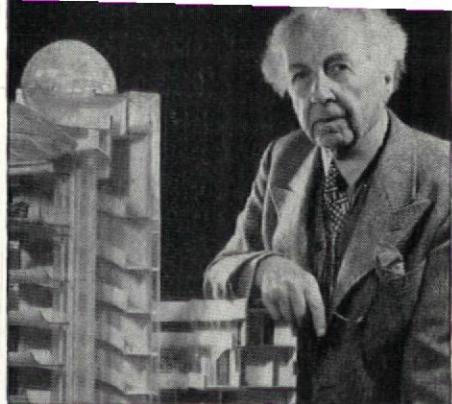
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The Architectural

# FORUM



Photos: Ben Schnall



# The MODERN GALLERY

The world's greatest architect, at 74, designs the boldest building of his career.

The supreme achievement of a great architect, the thing that sets him apart from lesser men for all time, is not merely his arrangement of areas for convenient use, nor the setting up of a structure that is both sound and economical: it is the creation of a space so enclosed that the very air inside seems to be alive. For a generation reared to consider the functional solution as the basic problem in architecture, this concept may seem strange to the point of heresy, yet historically it is the only one that retains validity. In every period the problems of function and structure have been solved with greater or less success, as the case may be, but it is some other quality that sets the great buildings apart from the others. St. Sophia in Istanbul contains a vast quantity of air, as does the concourse in New York's Pennsylvania Station: their difference lies in the staggering emotional impact produced by the former. Certain artists working in architecture have the ability to so arrange masses, shapes, surfaces and colors that the space enclosed comes to life and the building becomes merely a vessel. Frank Lloyd Wright is one of the very few who have had the ability to do this. Strangely enough, he is also practically the only contemporary architect known by name to the average American.

About a month ago Wright's model of the proposed Guggenheim museum of non-objective art, the Modern Gallery, was unveiled in New York for members of the press. It was promptly run in all of the big morning and afternoon papers, and, a few days later, in TIME, LIFE and other magazines. The building is an extraordinary building, but what comes to mind is not this so much as the curious fact of Wright's hold on the public interest. There is no other architect in the U. S. whose work and other activities have been chronicled so persistently in the press.

A good deal of Wright's fame began, of course, with the same kind of irrelevant, unfortunate publicity that once made a New York exhibit of Vincent Van Gogh's paintings sensationally popular: a popularity due at least as much to certain widely-publicized details of his private life as to his glowing canvases. Another architect—Stanford White—trod the same dubious path to unwanted recognition, but the parallel stops there. Wright is a genius, a great, austere figure. By comparison, Stanford White was a feckless, mildly talented college boy. Everywhere—even to a considerable extent in his own country—Wright is considered the greatest living architect, and when the history books are written again he will take on the stature of a Michelangelo. And even in the face of our overwhelming indifference to architecture, Wright has periodically turned out buildings which have shocked the public into an awareness of what life might be like if all buildings in cities were designed at this level. Because of this shock value in his work, the name of Frank Lloyd Wright has also been news.

A case in point is the Imperial Hotel, which was floated on a mat of concrete in place of a conventional foundation. The design was without precedent, and in the considered opinion of top U. S. engineers, it was also without structural merit. But when the Japanese earthquake of 1925 came, almost the first news that came through was that the hotel had floated through with a minimum of damage. Practically every paper in the country carried the story—there was something akin to the tale of David and Goliath in the way Wright had faced the problem of an earthquake, brushed aside the warn-

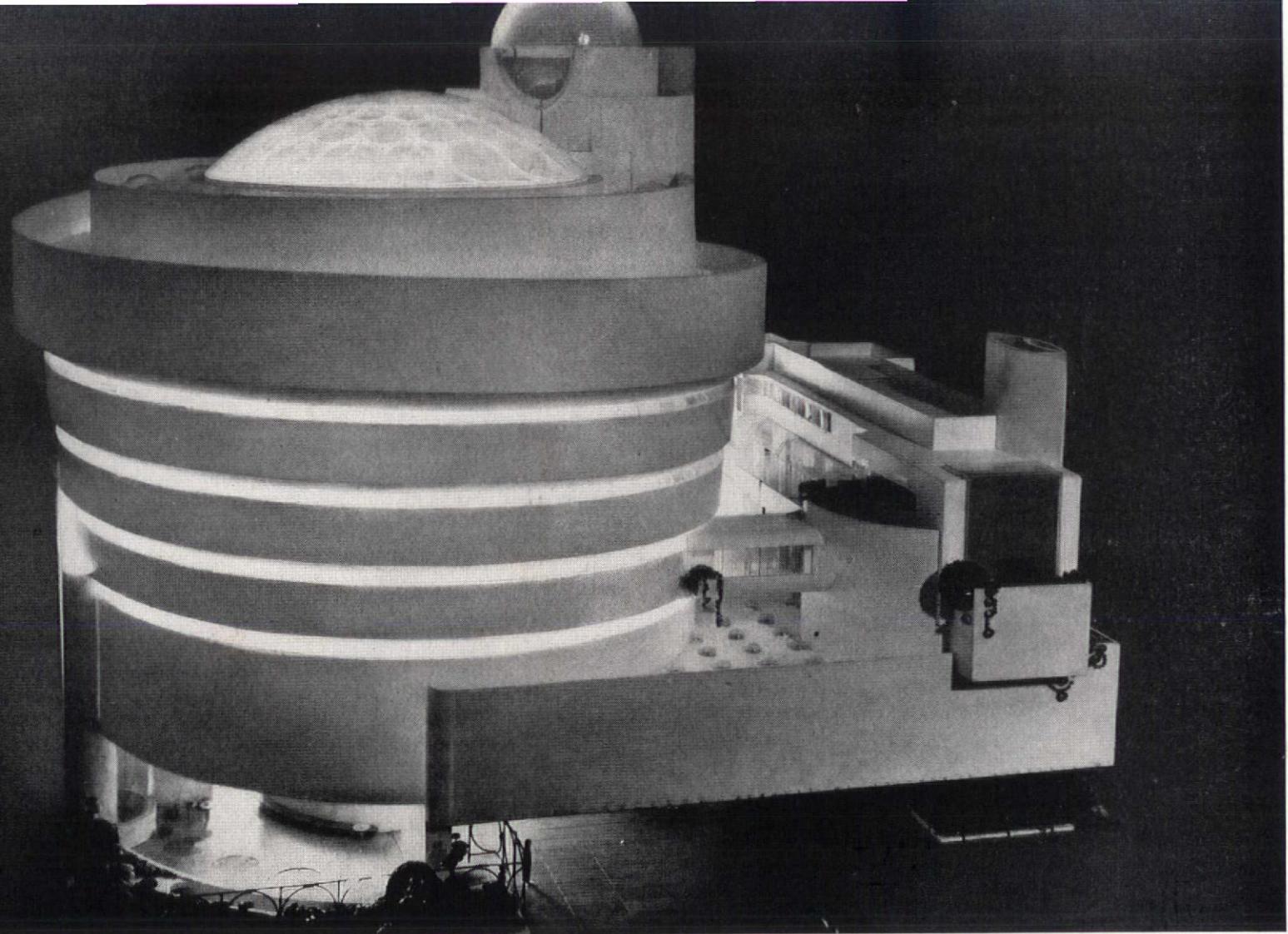
ings of specialists, and won—in a way, he had become a popular symbol of a universal desire.

This was not the first nor the last time Wright stumped the experts. There was, for instance, the case of the now-famous house for Edgar Kaufmann, near Bear Run, Pennsylvania. For Kaufmann, Wright designed a vacation house of stone, glass and concrete, a good part of which was cantilevered over water and rocks. All went well until drawings of the house went to a large steel company, which was to furnish the concrete reinforcing rods. Out of curiosity some of the company's technical people made calculations to determine whether or not the house would stand up. The figures showed that it wouldn't, and a letter accompanied by pages of engineering calculations was dispatched to Mr. Kaufmann, who very sensibly passed them on to his architect. For weeks there was no word from Wright, until one day a sealed lead box arrived, and a letter which said in effect, "I should like this box put under the cornerstone of your house when the cornerstone is laid. I want this done so that when the house is torn down, 2,000 years from now, people will learn what complete damn fools these engineers are!" The Kaufmann house is approaching the end of its first decade, and doing nicely.

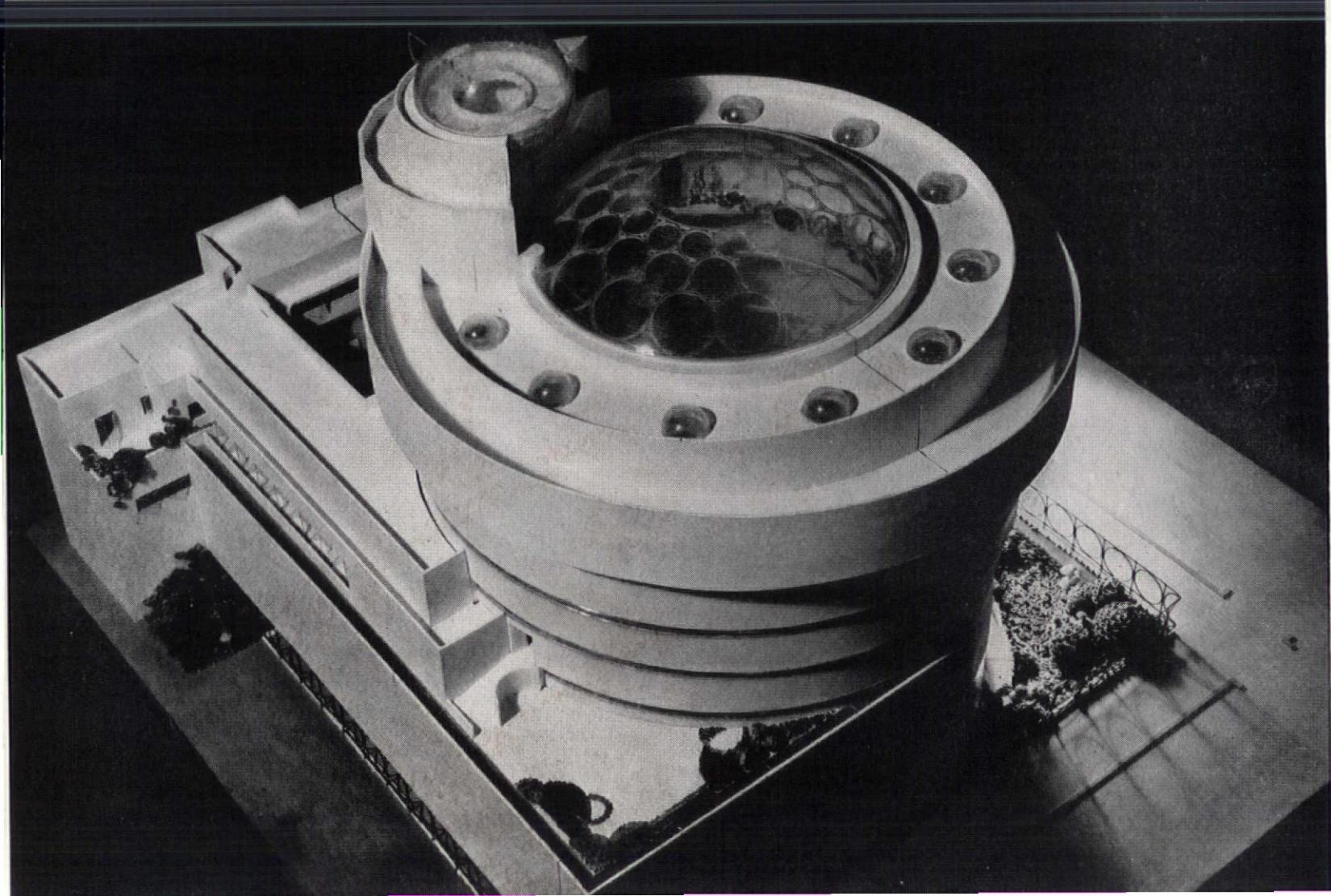
Whether these stories are true in the letter or only in spirit is of no great moment—they are part of a great and growing legend which is in itself testimony to the power of Wright as a personality and as a builder. There is one story, however, which can be vouched for, as it was heard at first hand. The occasion was the one already mentioned, when Wright showed his new museum to a group of editors.

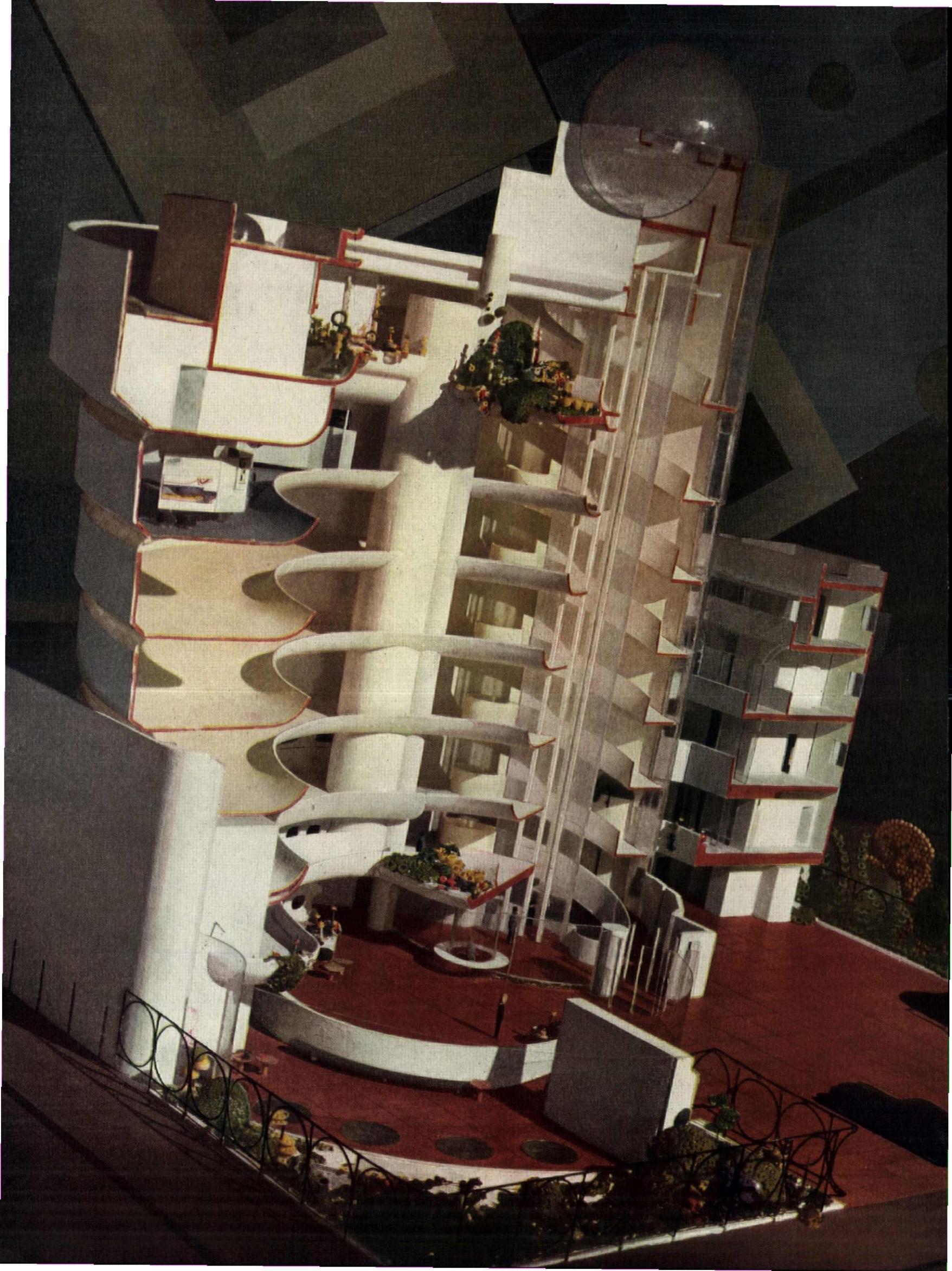
"This building," said Wright, patting the model as if it were a baby, "is built like a spring. You can see how the ramp, which is coiled in the shape of a true logarithmic spiral, is one continuous piece from top to bottom, integral with the outside wall and the inside balcony. When the first atomic bomb lands on New York it will not be destroyed. It may be blown a few miles up into the air, but when it comes down it will bounce!"

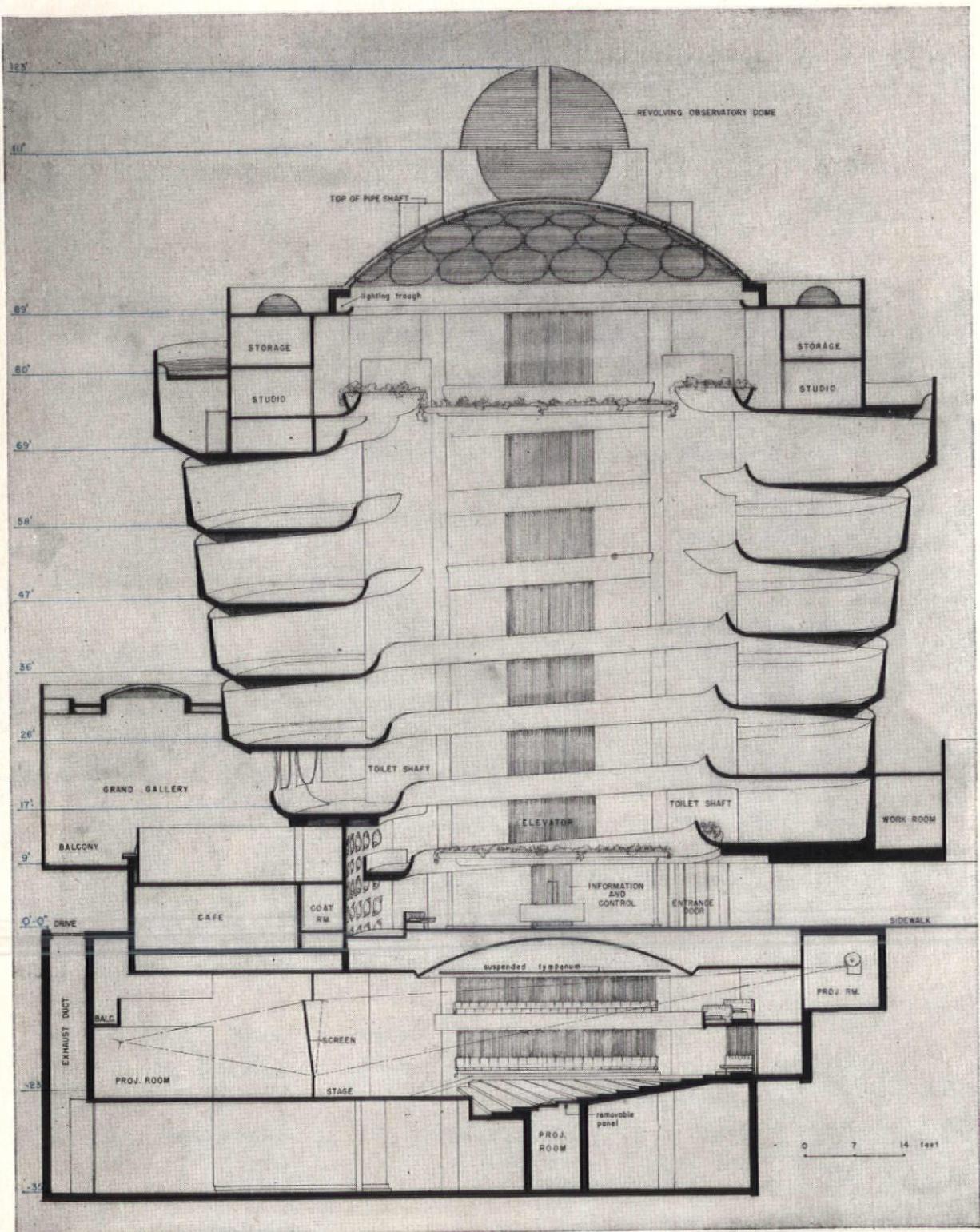
For most of the people present, the statement no doubt was sheer bombast and sensationalism, but basically it was true, and a new demonstration of the confidence, vitality and architectural genius which had long since made the man world-famous. The papers and magazines confined themselves to a description taken from a press release, and such comfortably patronizing adjectives as "bizarre" and "strange." If this building is "strange," so is the chambered nautilus, the structure of a leaf, the wing of a bird. We have been so hardened to the artificial and illogical in architecture that the natural and organic is almost incomprehensible. But when the building is built, and people drive in off the street to the front door and see the great ramps swirling round and round to the dome of stainless steel and glass tubing, eight stories above them—when they ascend in the elevators to the top level through circular shafts of glass—when they stroll down an easy grade for an unbroken three-quarters of a mile without any feeling of fatigue—then they will have had their first real experience of what architecture can be like. Many will be uneasy and make jokes about it, because we are not accustomed to thinking of buildings in terms of an emotional experience. But they will come back for more, and then the name of Frank Lloyd Wright will again be news, and this time for the right reason.



OPEN AND HOSPITABLE, STREET LEVEL DESIGN CONTRASTS SHARPLY WITH FORBIDDING STEPS AND COLUMNS OF USUAL MUSEUM  
THE, SPIRAL GALLERIES ARE LIGHTED BY A GREAT DOME OF STAINLESS STEEL GLAZED WITH CONCENTRIC RINGS OF CRYSTAL TUBING





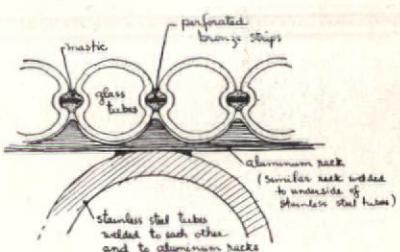


MODEL OF HALF SECTION OF BUILDING REVEALS INTERNAL COURT SURROUNDED BY SPIRAL RAMP

For all its complex appearance in plan or section, this structure is really a simple one. It consists of two tangent spirals. The larger and gentler one is that of the gallery proper; the tighter and steeper one offers quick communication between floors. At the point of tangency, these two spirals are intersected by the elevator shaft. Such a vertical development was dictated by the lot, at the corner of Manhattan's 5th Ave. and 89th St. Like everything else in the neighborhood, Wright's museum could only go upward. A vertical spiral rather than a vertical cage is a typically Wrightian protest against the arbitrary and restrictive landplanning of American cities. Such a concept is, however, more than a mere protest; it is also an inspired solution to the problem of museum traffic. For Wright's spiral permits the visitor to enter or to leave the gallery at any level he chooses. He need not exhaust himself in traversing exhibit material he doesn't want to see in order to reach something he does. Nor need he ever be lost—the very slope of the ramp points to the nearest exit, while elevator and washrooms are always in clear view.

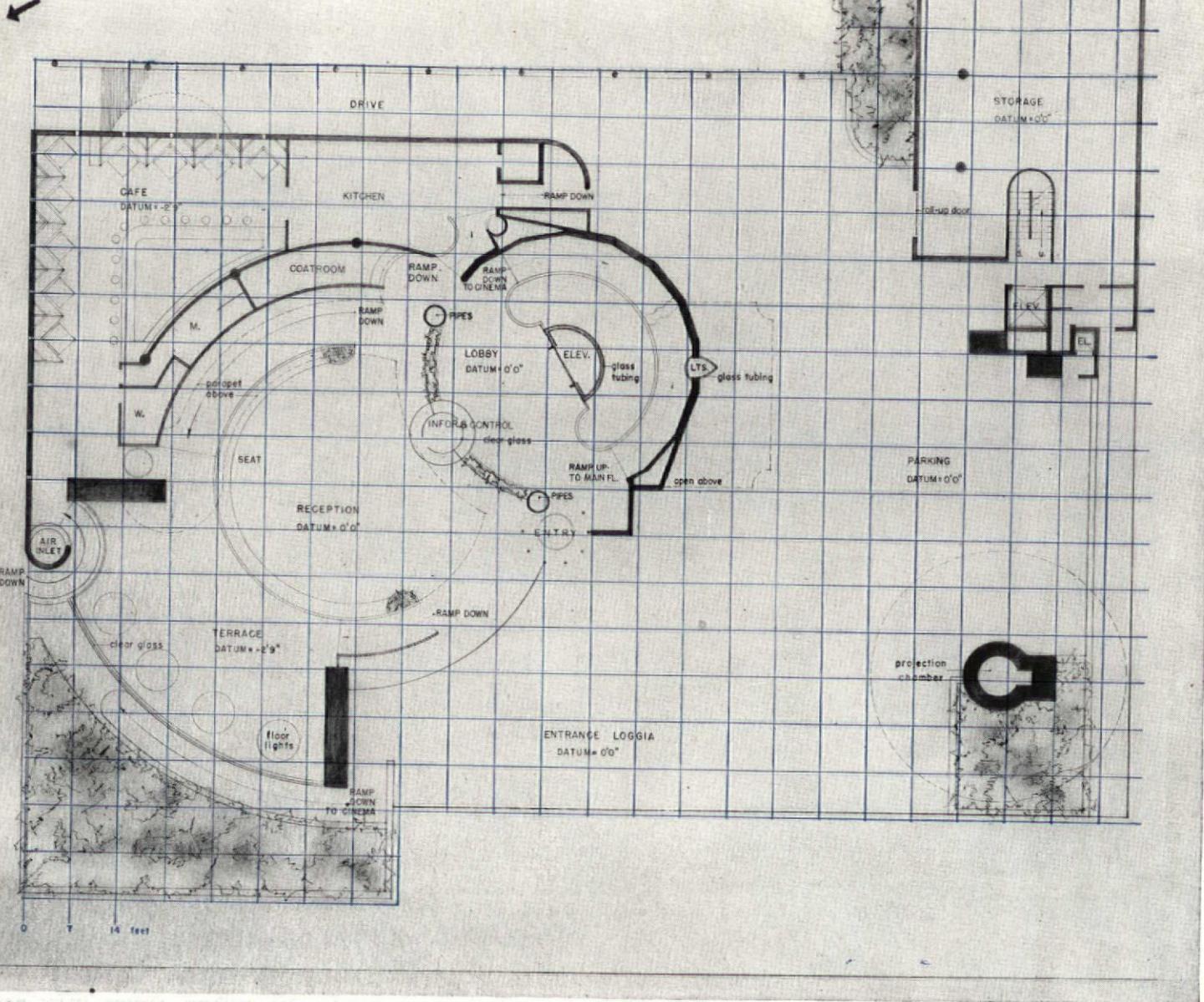
**STRUCTURE:** Originally designed for prestressed reinforced concrete, estimates on reinforcing steel have run so high that Wright has "turned the job over to the ship yards" for an estimate on welded steel construction. Fabrication in steel might involve certain changes in the design—elimination of interior columns, conversion of the spirals into continuous cantilevers. Actually, the slope of the main ramp is too gradual to figure importantly in a structural sense, so that even in steel the original design may be followed. Convined of the soundness of his overall concept of a building like a coiled spring, Wright has no especial prejudice in favor of either system—he sees this decision as one for the specialists and has left it up to them.

In the last analysis there is no reason why a building should not—like a fine machine—be fabricated of crystal, bronze and stainless steel, of aluminum and cork. Nor is there any objective reason why compound curves or close tolerances should appear so startling in buildings when they are so basic to bombers. Yet Wright's crystal dome is likely at first glance to seem otherworldish, so heavy upon us is the weight of custom. That his design involves precision in fabrication and care in erection is obvious. But that it yields a beautifully translucent dome—permanent and effective—is likewise apparent.

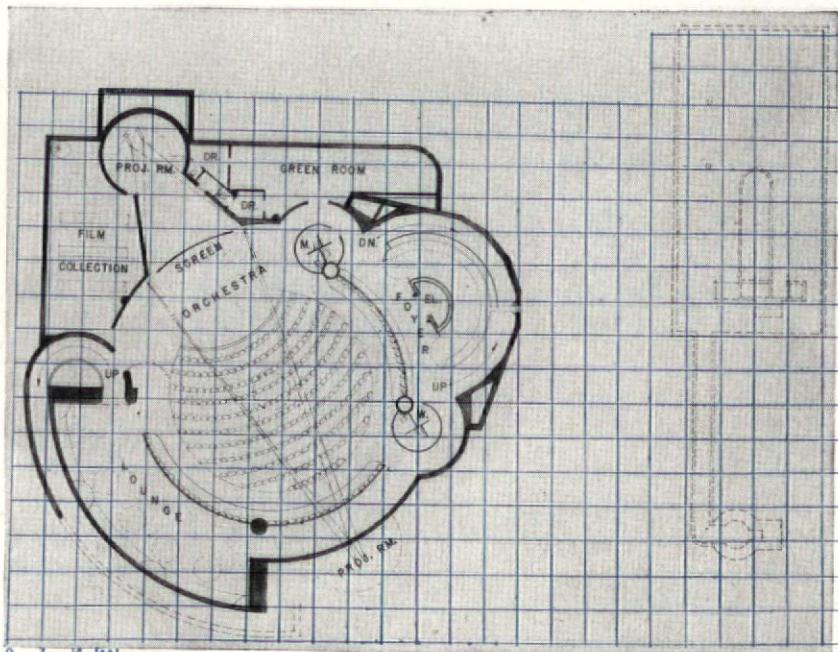


Wright first employed flat sheets of parallel glass tubing in his Johnson Wax factory at Racine, Wis. (FORUM, Jan. 1938). It was a daring idea—and not without its hazards—but it worked. Now, in the Modern Gallery, he has used it again but with many refinements—especially in the waterproof seal between the tubes.

Wright's sharp and acquisitive eye has seized upon the motorized wheel chairs of Atlantic City and incorporated them into the museum. He will lease them, at so much per hour, to those visitors who want to tour the entire gallery in leisure and comfort. And from the vacuum cleaner people he has borrowed and evolved the vacuumized door mats and footscrapers. Set in the floor of all main entrances, beneath perforated metal grilles, these vacuum devices will dust off clothes and shoes of all incoming guests.



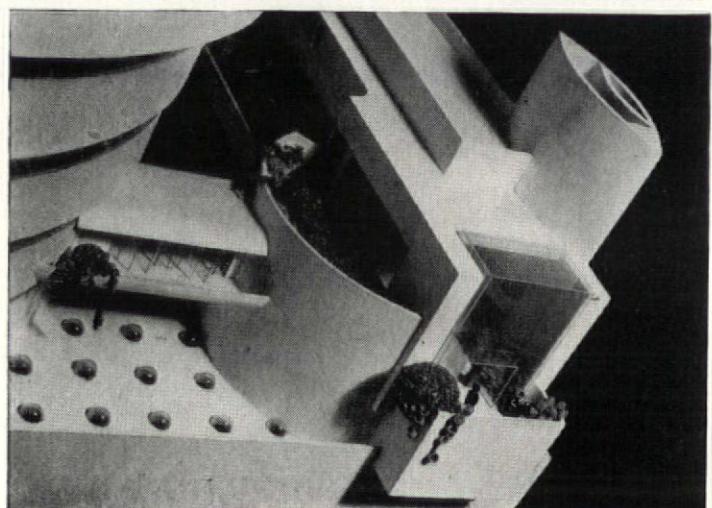
SINCE MAIN SPIRAL BEGINS ONE FLOOR ABOVE GRADE, RECEPTION AREA FLOWS EASILY INTO GARDEN AND LOGGIA

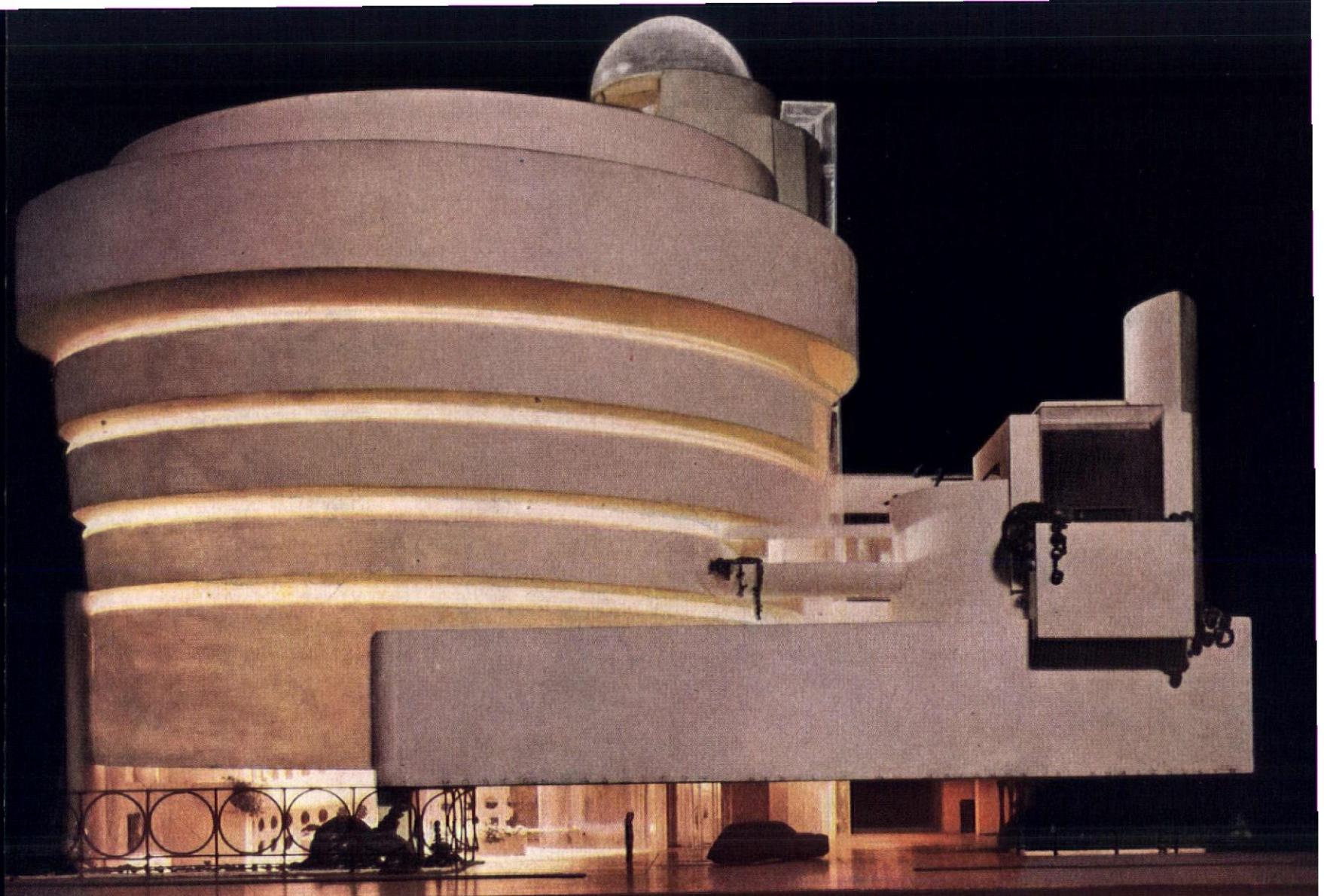


BASEMENT houses a theater seating about 400. It is reached by fast ramp and elevators from the reception room. There is also an emergency exit ramp to outside. In addition to complete projection facilities both in front and behind the screen, projection is also possible on ceiling. Film library and green room flank stage.

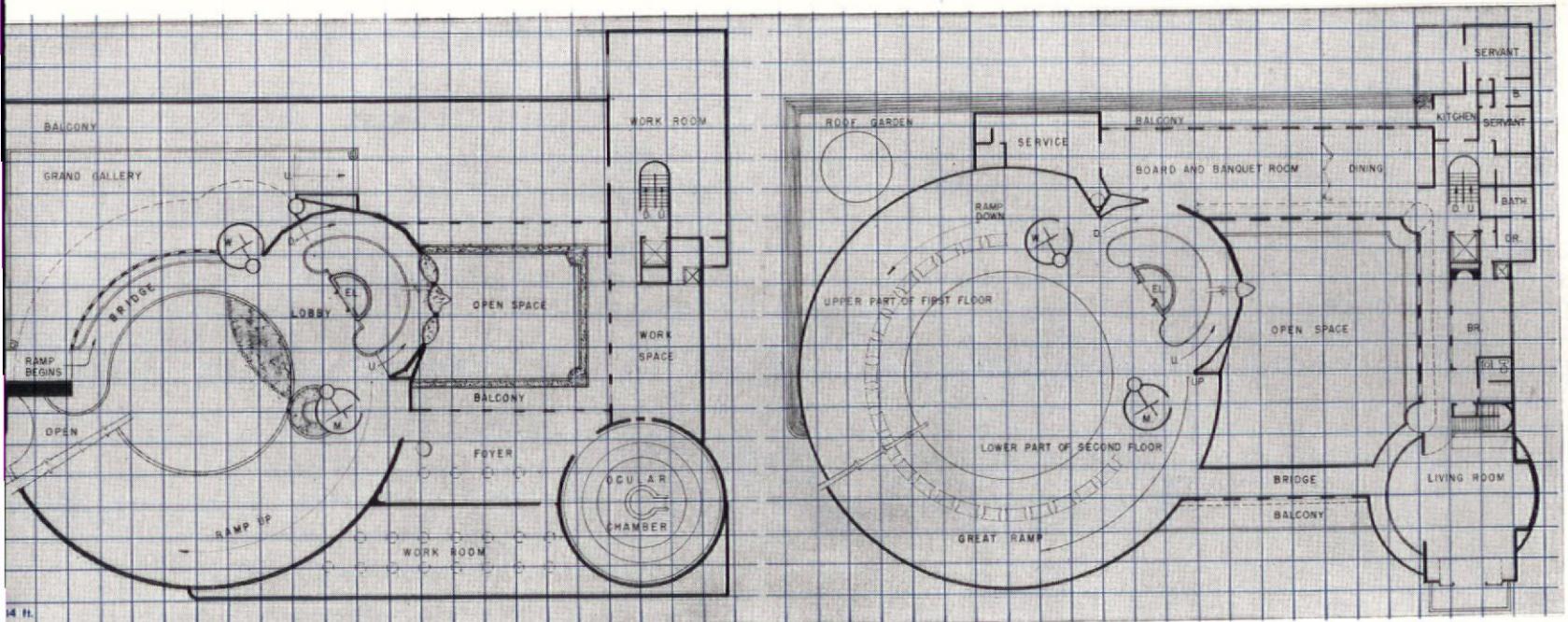
The main gallery spiral begins one level above the street. Access to this ramp—as well as to the subterranean theater—is by the smaller “fast” ramp and the elevators. This enables Wright to establish a central control point at the information desk, commanding both incoming and outgoing traffic. There is only one important outlook from the plot—to the west across Central Park. Here Wright has concentrated his transparent walls—in the circular glass reception room and in the living room of the director’s apartment.

BALCONIED PASSAGE JOINS GALLERY AND APARTMENT



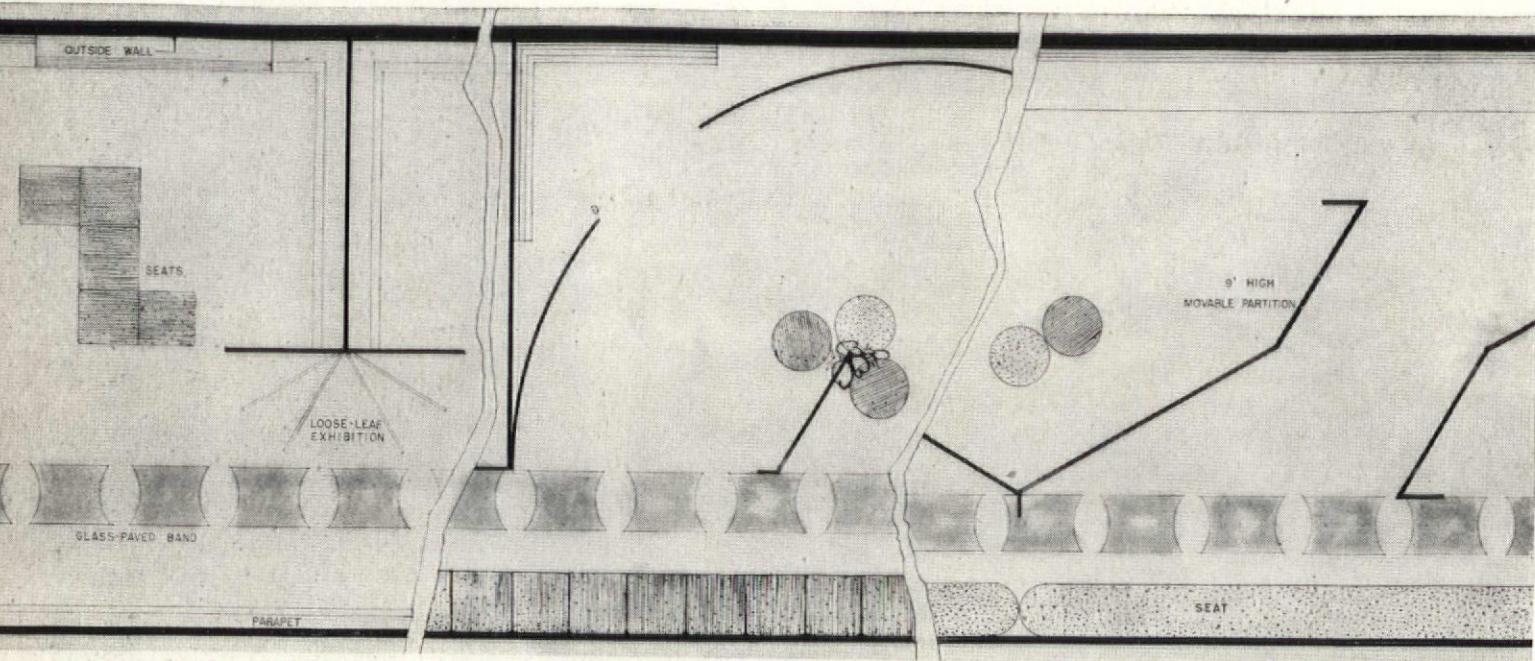


BRIDGED FOYER CONNECTING THE MAIN GALLERY WITH THE PROJECTION ROOM CREATES A SPACIOUS SHELTERED AREA FOR ARRIVING CARS



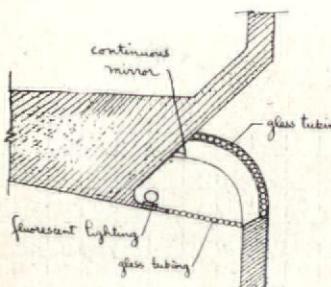
MAIN FLOOR. From here the spiral gallery begins its ascent. At this level also the bridged foyer to the circular projection room and workrooms beyond. Across the rotunda, a curving, bridge-like ramp leads down to the triangular grand gallery. A perforated wall screens this gallery from the central court.

SECOND FLOOR. Aside from the Board Room and the private apartment, this level is typical of the great ramp up to the top floor: there the gallery ends and a ring of studios tops off the spiral. A continuous band of glazed perforations in the spiral provides both floor and ceiling light.

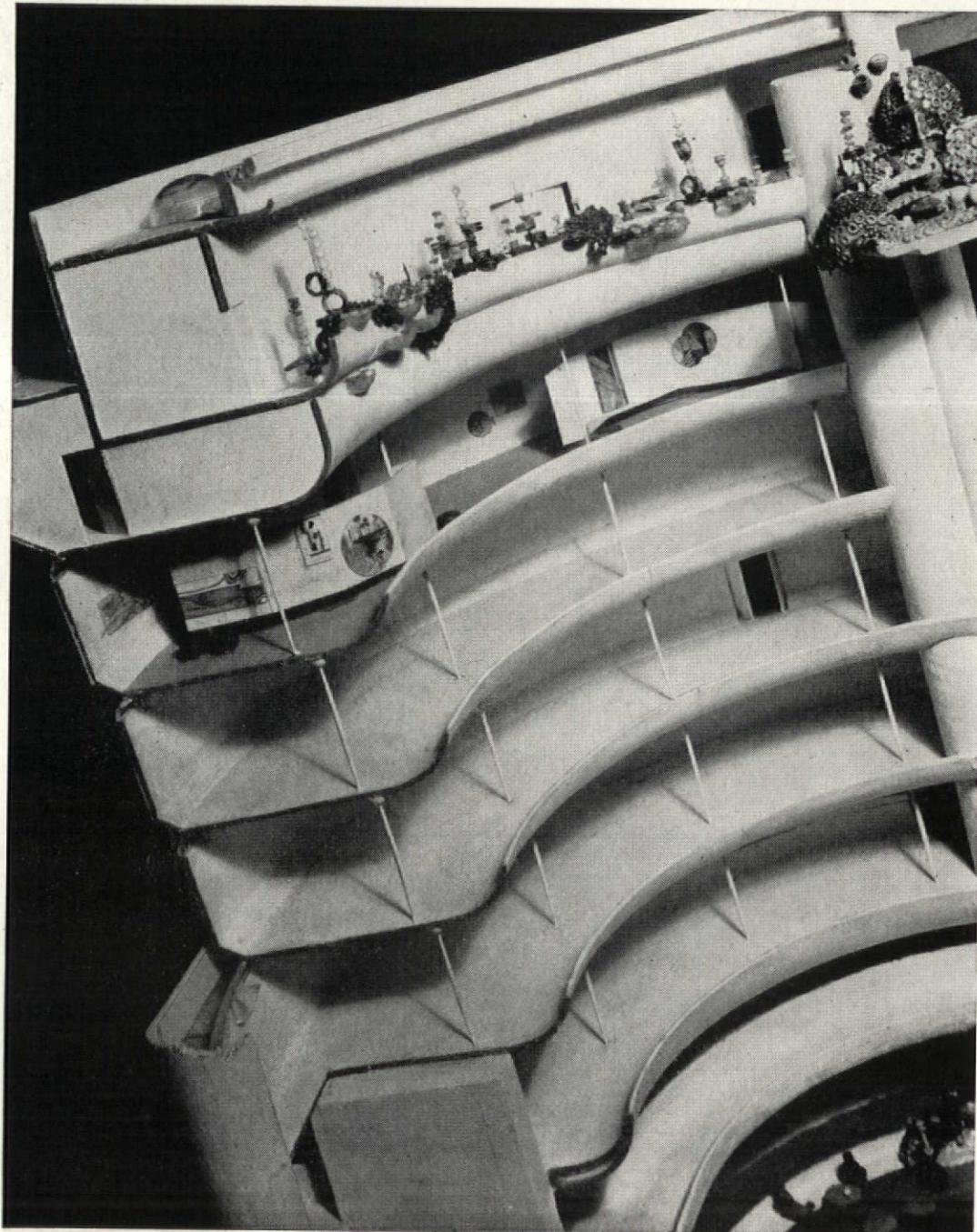


DRAWINGS SHOW VARIOUS ARRANGEMENTS OF FLEXIBLE PARTITIONS, HUNG FREE OF FLOOR, WHICH INCREASE EXHIBIT AREA

THE GALLERY proper is deliberately held to an intimate scale, with an average ceiling height of 9 ft. 6 in. Yet taken altogether, the museum provides the astonishing total of almost  $\frac{3}{4}$  mi. of ingeniously-lighted wall surface. In addition, Wright's design calls for a system of flexible partitions—movable and self-lighted—which can be used to subdivide the 25 ft. wide ramp in any desired fashion. Built-in seating is continuous along the inner edge of the spiral parapet.

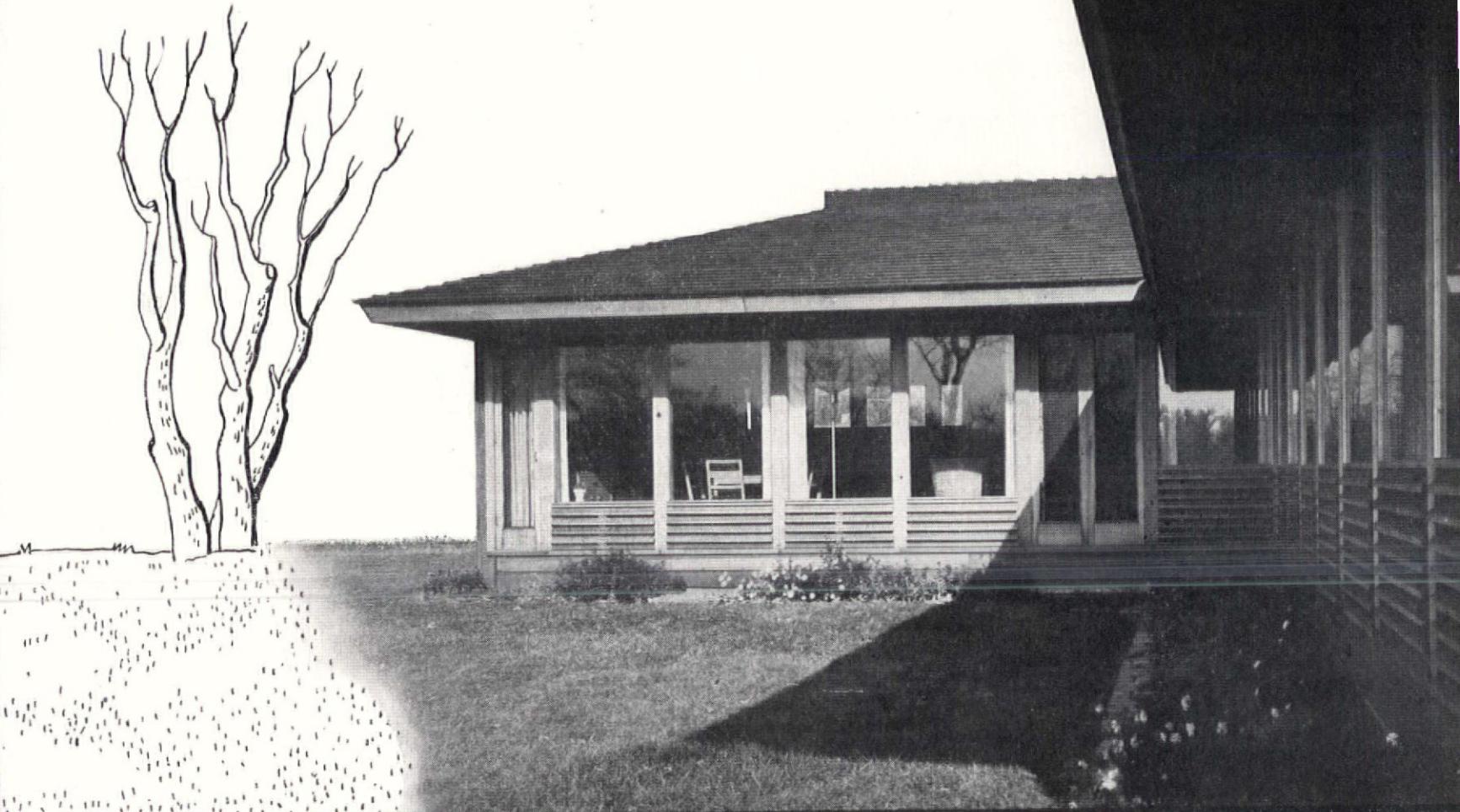


The outer wall of the spiral is lit by a continuous light trough cut into the side of the building like a huge screw-thread. This is the source of both natural and artificial illumination and is constructed, like the dome, of glass tubing. Diffused light entering through the outer layer of tubing is reflected downward toward the exhibit wall by a mirror at the back of the recess. This mirror also serves as a reflector for the wholly-concealed artificial lamps.



# CO-OP HOUSES

A group of Chicago families combine their efforts and pool design ideas in a harmonious setting for suburban living. Paul Schweikher, architect.



UNIFORM DETAILS AND SIMPLE, HONEST DESIGN FOCUSED GROUP TASTE IN A HARMONIOUS PATTERN OF WOOD AND GLASS

The houses shown on the following pages are part of a promising experiment in cooperative housing initiated by the homeowners themselves. It started back in 1938, at the North Shore Cooperative Society, in Evanston, Ill. A number of Society members were interested in building, but were looking for more than just houses. They were seeking a chance to prove that the economic and social philosophy of cooperation, tested fruitfully in other fields, could be applied to larger things than groceries. Their 7-house community is the first result.

Aside from this common objective, the group's cooperative efforts had two strong foundations. All are in the same (\$4,000-\$7,000) income group. Secondly, all are well above average intelligence, with varied talents. Charles Cummins, president of the Society, works for the Equitable Life Assurance Society. Arthur Frost teaches chemistry at Northwestern. George Simonds, who audits the Society's books, is a C.P.A. George Miller, Co-op treasurer, is a management engineer. Russell Scargle does public relations work for Illinois Bell. Lawrence Parrish is a personnel consultant, and Eugene Bowen is execu-

tive secretary of the Cooperative League of the U. S. It was this group which first began to study the possibilities. After a year of discussion a charter was drawn.

Getting the right land came next. This was no easy job, for it had to combine rural atmosphere with convenient commutation to Chicago, and be near shopping facilities and good schools. It took months to find a suitable tract of  $5\frac{1}{2}$  acres in Glenview, eighteen miles from Chicago's loop. Ten families underwrote the purchase, received \$25-shares in proportion to their investments.

The group knew that getting the right architect would be the key to success. Their standards were formidable. The man they wanted had to have advanced design ideas, anticipate the future in selecting materials and understand the feeling of living close to nature. More, he had to mold the individual requirements of seven families into a unified plan, while avoiding a standardized effect. Luckily for all concerned Paul Schweikher, who was finally chosen, proved ideal. In the words of one member, "Everyone had different ideas. Paul molded the group. We all



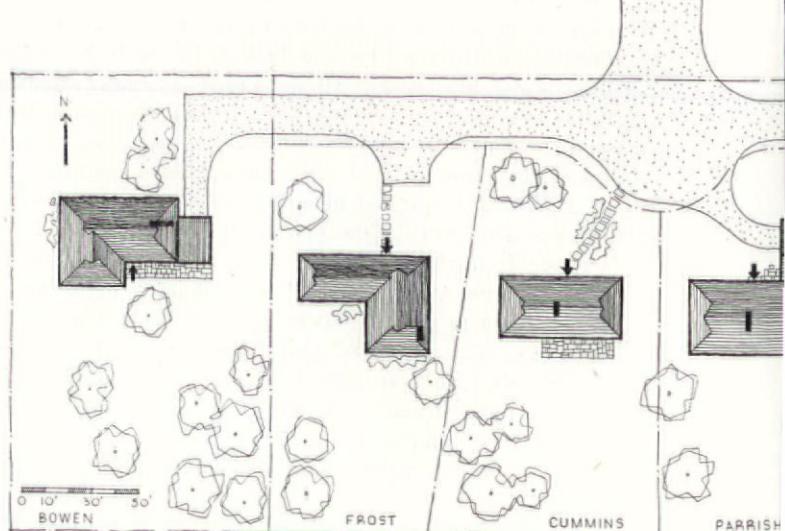
IN-LINE ARRANGEMENT OF SEVEN HOUSES WAS POSSIBLE ON LONG RECTANGULAR SITE. THIS IS GARDEN SIDE OF GROUP FACING TO S

gave in all along the way. But it was his personality, his ideas that carried us through."

Just how highly the group regarded Schweikher can be gathered from the fact that he was given *carte blanche* to parcel out the land, avoiding a wrangle over allocation. Some wanted (and got) larger lots than others. By using the individual house plans as a basis for lot choice, Schweikher managed to please everyone.

Next investment required by the corporation was for road and utilities. With the lots allocated, these costs were distributed on a square footage basis. At this point three families decided to postpone building; the Corporation still holds their land for them. They will not receive title until they build.

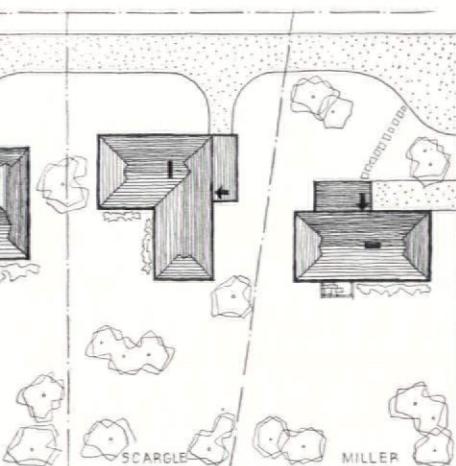
Meanwhile, headaches developed on financing. The original plan, which called for cooperative ownership of land and houses, had to be abandoned when it was found that a 40 per cent equity was necessary for a joint loan. So instead of each family holding stock equal to the value of their house and lot, the project reverted to individual financing, and amounts invested in land and



## HOMEOWNERS' OPINION



WIDE EAVES SHIELD LARGE FIXED WINDOWS, KEEP OUT SUMMER SUN AND RAIN



The sum total of the owners' reactions to the project add up to just one word — satisfaction. This was due largely to Architect Schweikher. According to Lawrence Parrish, "Paul worked with us individually. We are highly pleased with everything in our house. Naturally, there are some minor changes that could be made . . . no one ever constructed a *perfect* house."

Complaints are surprisingly few. The Simonds have a part basement and report serious moisture condensation.

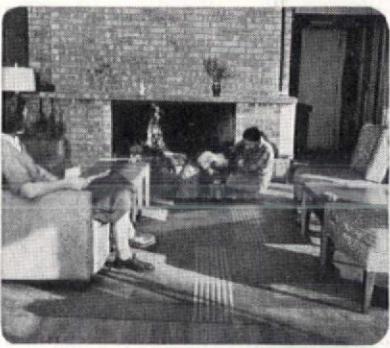
Big rooms and sunny corners solve the recreation problem on cold days



The Cummins house, with no basement, is least troubled by this. Mrs. Simonds also says that the 4-ft. eaves keep her indoor plants from flourishing from March to June. But this, she feels, is a minor objection. "We formerly lived in a big, old-fashioned house," she says, "I would never go back to it now."

Everyone is delighted by the handsome plywood interiors. But all agree that if they had it to do over again they would never tackle the job of finishing them. It was

Rooms like this are big enough for fun and cozy enough for lounging



gruelling work. Walls were washed with naphtha, then a flat paint went on. Next followed sandpapering, then shellac, then steel wool, then varnish, more steel wool and finally, waxing. The result is a wall that requires practically no maintenance.

Some of the families feel that the Scargle house, with its long halls, demands an unnecessary amount of walking. But this and the Parrish house seem popular with the men. Another complaint which was registered was

"A seven-dollar investment in a wheel barrow is only one dollar each, our way"



one about the high, "cow barn" windows in the kitchens.

The fireplaces which dominate the living rooms are a continual source of delight. Eugene Bowen says, "A thing of tremendous significance to me is the way our fireplace breaks the living space into three rooms, by standing right out from the wall. Ours is in three shades of Tennessee Crab Orchard Stone. People just drop

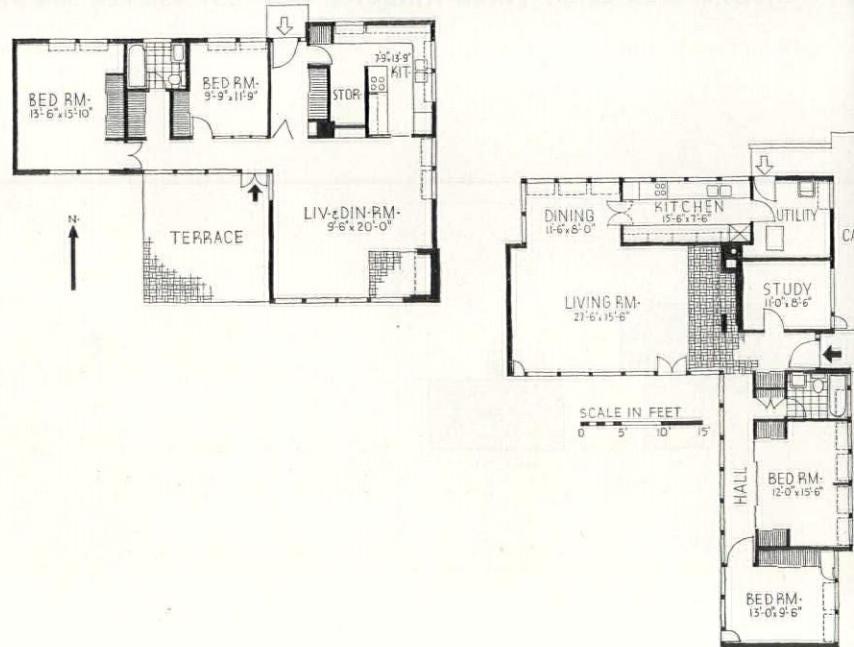


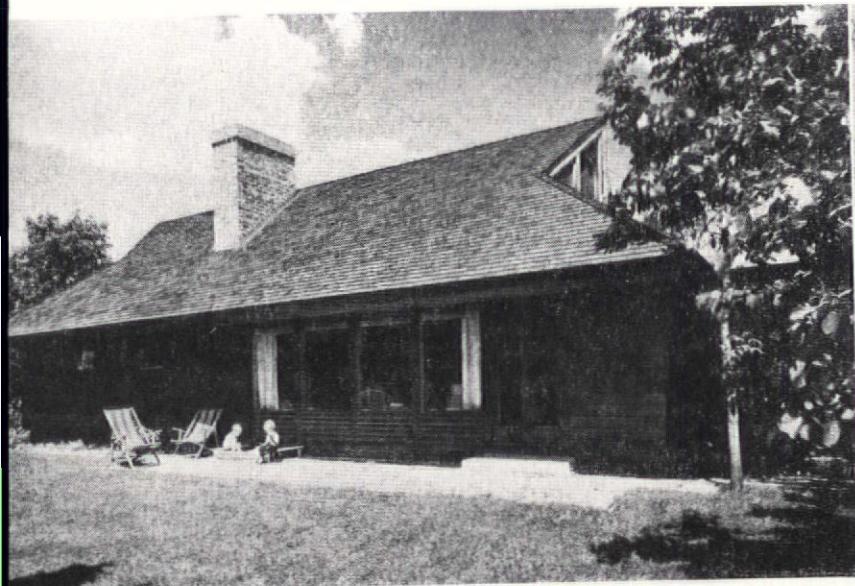
**FROST HOUSE** has tiny kitchen and only two bedrooms, but the Frosts, who have three daughters, find it comfortable. Roomy yard and terrace help to solve child-play problem. Built for about \$9,500 (1941), the house will age well. Redwood exterior blends with shingle roof. Windows are double-glazed.

improvements were refunded, except for a few token shares kept by each.

Today each home and lot is owned individually, so as a financial agency, the corporation is presently unimportant. An informal agreement governs resale, giving the corporation an option at cost or replacement cost, whichever is larger. If the corporation does not exercise its option, the owner may sell on the market. A formal contract of this type may be drawn, but so far members have relied on group interest and common sense, rather than legalisms. Using this formula, they have "yet to find a problem which cannot be solved by cooperation."

Schweikher sold the group clean, straightforward architecture. Exterior finishes throughout are redwood beveled siding over insulating board, alternating with redwood board and batten over pine sheathing (generally used for spandrels). With one exception, where the owner wanted fieldstone, chimneys are brick. Roofs are covered with red cedar shingles, plywood was used as

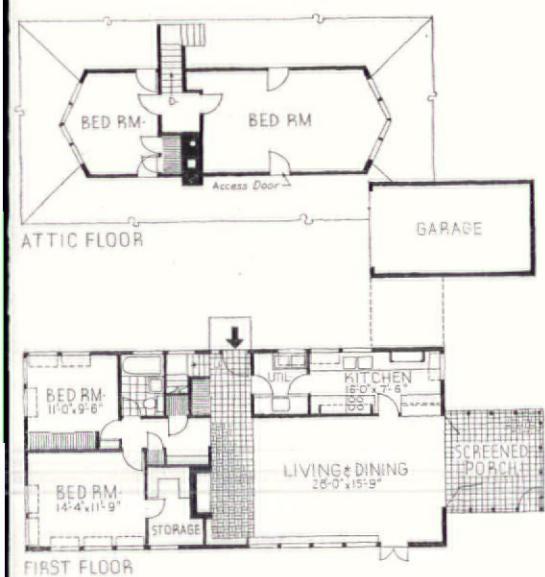




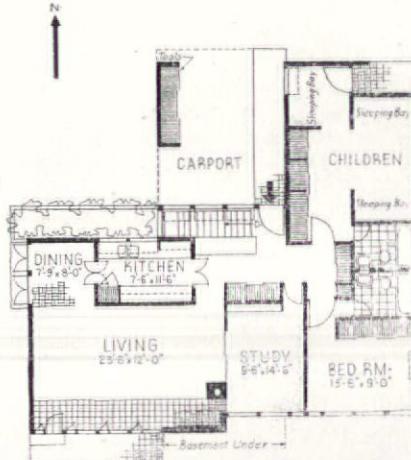
**PARRISH HOUSE** is distinctive in two ways: it is the only unit of more than one story and has a complete garage. Second floor bedrooms are lit by triangular windows in gable ends. Screened porch adds to apparent size; brick fireplace. Cost was \$9,000, lowest in group.



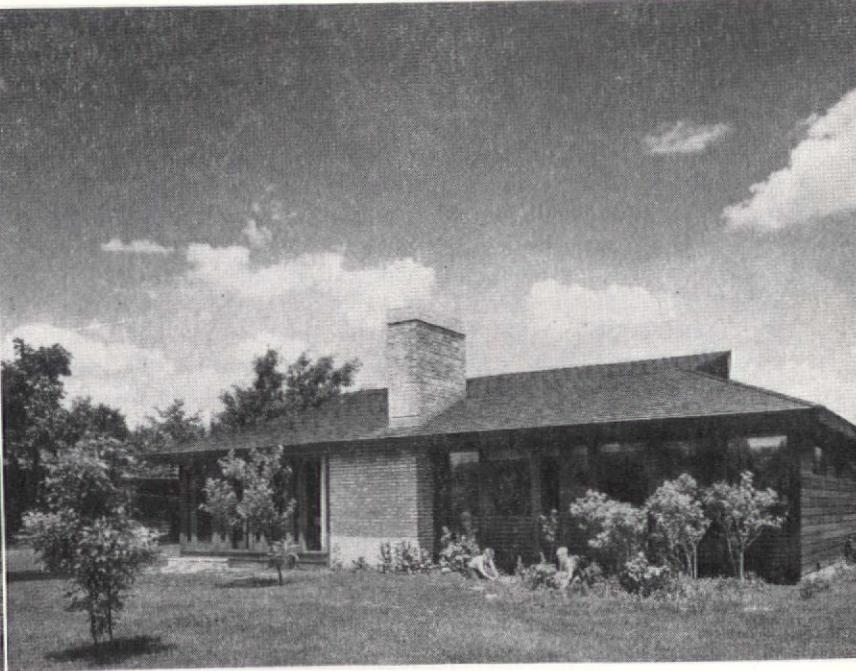
**BOWEN HOUSE** has a short, strategically-placed hall. Kitchen has 12 ft. expanse of glass over the work counter and sink, bedrooms have generous windows and 12 ft. closets. Stone fireplace divides living-dining room into definite areas. Cost in 1941: \$10,500; replacement today would be much more.

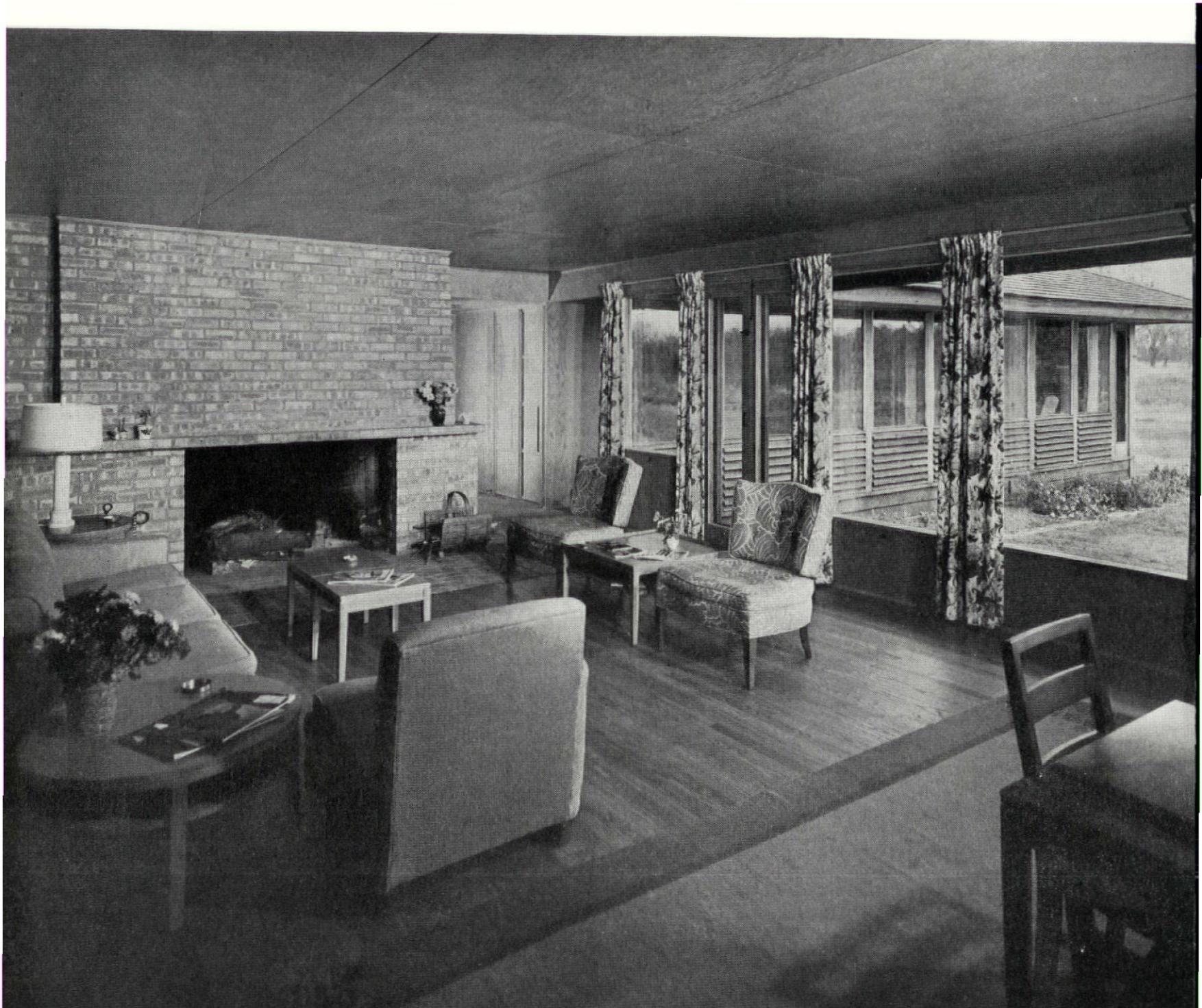


**SCARGLE HOUSE** is only one of group to be rented. Scargle, who has two young children, spent two years in the Navy. Children's bedroom opens into hall, converting into playroom. House cost \$11,500, boasts a separate study, sizeable utility room and carport. Windows in photograph face south and east.



**SIMONDS HOUSE.** With four children, CPA Simonds finds his house too small, but likes the big south windows and openness of the plan. The tiny dining alcove is a particular grievance. Children's sleeping area is treated as a semi-divided dormitory with a separate bath. Cost was \$12,000 in 1941.





LIVING ROOM OF SCARGLE HOUSE SHOWS EFFECT OF PLANNED FURNITURE ARRANGEMENT. BEDROOM WING FLANKS LARGE FIXED WIN

the interior finish in all rooms and for bathroom and kitchen sub-floors. Roof overhangs are uniformly 4 ft. deep. Windows are continuous on south and east sides of most of the houses, with fixed glass and separate, louvred ventilators in most cases. With the exception of the Parrish house, all are one story.

With such emphasis on wood and windows, choice of a contractor and carpenters was especially important. Contractor Edward J. Hawkins, then of Maywood, Ill., was the one selected. He undertook the project on a cost plus — maximum basis, returning 50 per cent of the savings effected on his maximum estimate. Uniform materials, construction methods and architectural details are estimated to have reduced costs 10 to 12 per cent. Schweikher used one set of specifications for all houses, with variations indicated. Quite by accident all the carpenters proved to be members of a Finnish cooperative group.

Cooperation (and hard work) didn't end when the members moved in. In many ways, it really began only then. They pooled their labor and built driveways, dug gardens, cleared the ground.

They had a landscape architect work out an integrated planting plan, which they are still carrying out. Certain tools and equipment are cooperatively owned; everyday problems like child-watching and car-sharing are cooperatively handled. Now that building is over, business meetings of the group are held only every three months, with social meetings monthly.

Undoubtedly the project, with its pleasant site, its intelligent membership, and the happy choice of architect, contractor and craftsman had an unusual flow of luck. But it also took patience and fortitude. Said one resident: "We have learned by trial (and some tribulation) that we can have better quality houses, more beautiful houses, at lower costs — and intangible personal rewards that are probably even greater than these tangible material results. We believe we have demonstrated that what the individual can do is picayune compared to what a group can accomplish." And, whatever social theory inspired the development, the results go a long way toward justifying such an approach.

## HOMEOWNERS' OPINION (Cont'd)

dead when they walk in and see it. I almost do myself."

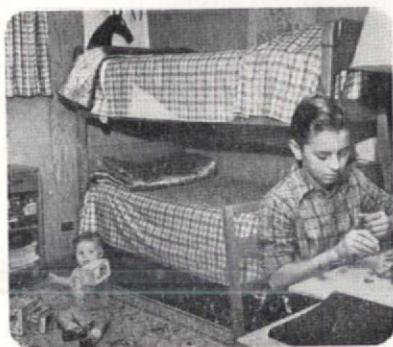
Said another, "We didn't know a thing about this business, so we just went along on faith. The Scargles insisted on exposing the brickwork of their chimney in the living room, and we all followed suit. Now we all get tremendous compliments on our chimneys."

The residents like the way the houses are oriented. As Bowen wrote in a recent article on the project:



"Nothing fancy about this kitchen, but lots of good storage, easy to clean"

"Our houses are reversed from the ordinary — you approach from back yards as spic and span as any front yards. Glass windows extend around as much as 60 per cent of the houses. The sun rises inside our bedrooms, it shines in our living rooms and sets in a beautiful cloud-effect we can see from our dining tables. The moon comes up and keeps us company during the night." Another, less poetic, phrased it in these words, "I like the



"Our son would like a room of his own, now that he's older, needs always change"

way we practically live outdoors with no discomfort."

The group considered radiant heating but dropped the idea because of limited budgets. Otherwise, they got almost everything they wanted. As Bowen sums up: "I am particularly interested in the housing aspect of the cooperative movement and believe that there are going to be other developments of this type. Schweikher was not a "Co-op man" himself, nor was our builder, but

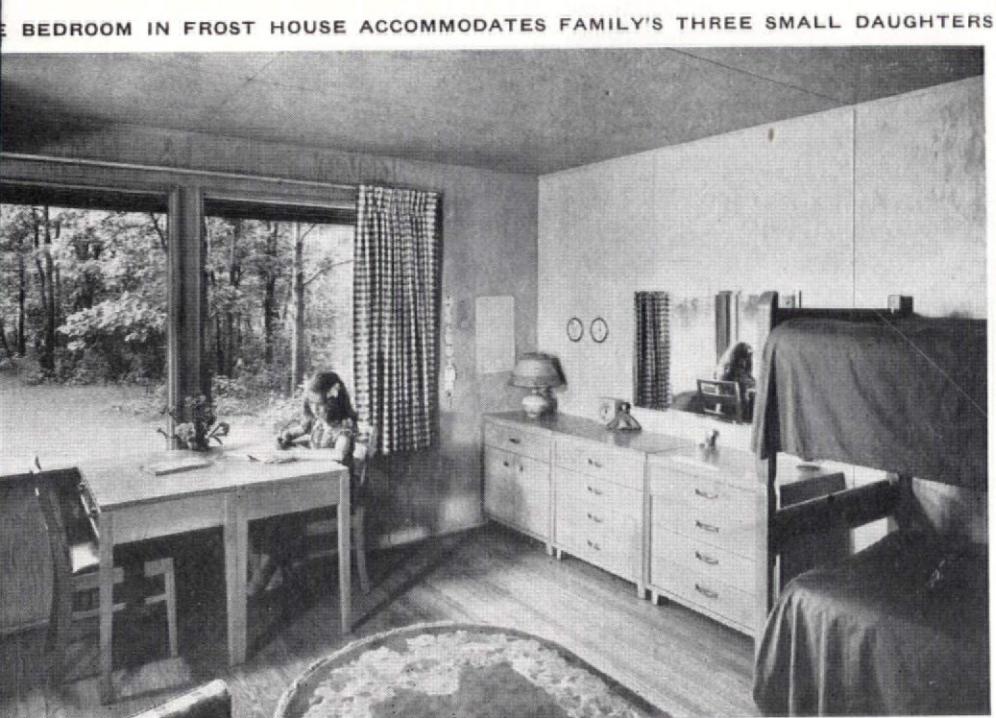
Cooperation starts at an early age.  
17 children under 12 play together



our relationship was delightful . . . Thus far the building-together idea is so new that financial agencies consider individual loans a safer bet, but conventional financing serves as a stop-gap. As soon as we have a 40 per cent equity we will arrange for straight cooperative ownership. Some of the technical details of such a venture are still unknown in America but it can be handled through a blanket loan to the whole group."



OOD FINISH AND CABINETS MAKE PARRISH KITCHEN CHARMING AND PRACTICAL



BEDROOM IN FROST HOUSE ACCOMMODATES FAMILY'S THREE SMALL DAUGHTERS

# MAN OV



ROBERT WHITTLE DOWLING towers over Manhattan real estate as he towers over small men. President of the City Investing Company, solid, old-time New York firm owns six apartment buildings, seven tenement buildings and one hotel; is a key man in the building programs of Metropolitan Life Insurance Company and R. H. Macy; dominates the estate policies of several banks, talks back to Robert Moses and was the first man ever to swim all the way around Manhattan Island.

The concentration of real estate wealth and power in the hands of one individual was a common occurrence a hundred years ago when the fabulously wealthy Astors and Vanderbilts owned huge blocks of New York property and sat smugly on their holdings. But as buildings grew and multiplied, the individual real estate investor shrank almost to insignificance. Dowling alone has set his powerful (6 ft. 1 in., 200 lb.) frame and barrel (47 in.) against the trend. It is commonly agreed that this man with the big muscles and the hard jaw is the most potent individual in New York real estate today. At the age of fifty, his energy appalls younger men and his uncanny knowledge of Manhattan land values confounds his elders. For this, his unusual physique is partly responsible. Rarely seen without a hat or overcoat, he has walked around almost every block on Manhattan, getting first-hand knowledge of the property.

Unlike most successful operators in the field, Dowling is often called progressive. One enthusiastic journalist termed him "pettuous" and "revolutionary." This was at least partially inspired by his handling of the Parkchester—first large-scale, low-rent housing project built for Metropolitan Life, and by his current work on Stuyvesant Town, a project destined to displace Manhattan's "gashouse" district on the lower east side. Thus, Dowling is a man who combines a desire for money-making with a carefully nurtured sense of his social responsibility. He is ready walking the tight rope which few men essay until they have laid by their fortunes and are uneasily trying to square themselves with God.

Some might consider that the Horatio Alger quality of Dowling's rise is dimmed by the fact that he was not a puny lad and the son of a poor, but honest, day laborer. His father, Robert Emmet Dowling, founder of the City Investing Company in 1905 and president until his death in 1943, was for fifty years an outstanding figure in New York real estate. He expected any son of his to follow the same path. In addition, he was an extraordinarily athletic man who, as a matter of course, pushed his offspring in the same direction.

Under the circumstances, Robert might have

xpected to rebel against fate as did his brother Allen, an unsuccessful poet whom an acquaintance once remarked: "ever he can, Allen just relaxes." But, Bob apparently set out to beat the man at his own games. As a result his has been a grueling yet neatly balanced routine of hard, slugging work and hard sports.

intense and serious concentration with he applies himself to anything—  
er acquiring business acumen or mus-  
perfection—is his outstanding character.  
With drive of such magnitude he might  
ave arrived where he is today, even if  
started as a messenger boy.

act, the similarity between the careers  
er and son is more of a hindrance than  
o to Dowling. Old employees at City  
ing (who should know) stoutly main-  
at R.W. will surpass R.E. But others  
ankind enough to say that he is a pale  
on of his father.

### TIME OPERATOR

the very start of the City Investing  
any, Dowling, Sr. began to acquire prop-  
n the three sections of New York which  
ught most vital—the downtown business  
n, the Broadway amusement section and  
th Avenue residential section. This pat-  
Dowling, Jr. has carefully followed.  
en Robert W. took over City Investing,  
er, he instituted many changes in the  
old-fashioned real estate office. He  
immediately to a more up-to-date build-  
nd, although keeping much of the mas-  
lawfooted furniture, enlivened the walls  
huge photo-murals of New York City.  
stalled Music by Muzak which plays  
during the day except when Vice Presi-  
Walter Binger, who doesn't like it, man-  
to turn it off. The office, which always  
lized in permanent investments, is now  
menting in buying and selling. New  
ment investments have also been ac-  
l, including office buildings in the vicin-  
East 53rd Street and apartment houses  
up Fifth Avenue. Already in posses-  
f the Astor, the Bijou and the Morosco  
rs, City Investing added the Victoria and  
1 in 1943, the 46th St. and the Coronet  
15.

of the first major investments he made  
taking over the presidency, was the pur-  
of the lush Carlyle Hotel on Madison  
e at 76th Street. Since its construction  
years before, it had been considered  
the choicest residential hotels in Man-  
a type of property particularly appeal-

Dowling. When he heard that it was  
le in 1943 he decided to put one of his  
state maxims—that a high quality hotel  
ly managed can always make money—

into practice. Negotiations took him three weeks during which time he investigated the plan and construction of the hotel itself, replacement cost in comparison to the sales price, and the quality of the neighborhood. This last inquiry led him to buy nearly 2½ blocks of adjoining property in order to control the environment of his new baby. Then, the Carlyle his at an unrevealed bargain price, the fun began. Dowling with methodical thoroughness followed through on every detail of new management. First he lured the manager of the Waldorf Towers, a man trained by the famous Mr. Lucius Boomer, to take charge. Then he devoted himself to such details as planting trees around the property; having rich ice cream made to his specification; seeing that the maids wore hair nets; raising the waiters' pay and improving their working conditions to assure courteous service. Last, as he cagily puts it, he "improved the quality of the tenants by careful selection."

This is the Dowling recipe for a successful investment, and so far the smooth-running Carlyle is no exception.

He uses the same thorough, regrooming technique on the theaters which he purchases, and is openly contemptuous of what he calls "the Shubert method of operation." According to Dowling, this includes gilt, brown velvet, drafty dressing rooms and a practice of never sending the drapes to the cleaners. When he bought the Forrest theater (later rechristened the Coronet) at public auction a year ago, it was replete with such dowdy trappings. Under his management its interior has become reminiscent of a Viennese ballroom with soft blue satin draperies and seats painted to match. Dressing rooms are luxurious suites complete with kitchenettes; air conditioning has been installed and everything is spotlessly clean. The unusual thing about both the Carlyle and Coronet purchases is that Dowling bought them when other real estate men considered hotels and theaters bad investments. It is undoubtedly Dowling's perfectionist ideas of management which have proved them wrong.

One of Dowling's favorite projects at the moment is the block from 45th to 46th Street on Broadway. This he is planning to tear down and replace with a unified scheme including a restaurant, a quality clothing store and two theaters, one topped by an office building fine enough to attract companies of national importance. The idea of a theater building in the Times Square section with offices above it is one of Dowlings better brainstorms, and shows great foresight in bringing to this district a long-needed stability.

Ely Jacques Kahn is the architect for this block and at the moment is almost slap-happy over the sudden changes and requests for new renderings which are shot at him. Dowling is

apt to give an architect free rein and then take the completed plans or model to his business friends for suggestions. One architect went in the red on a job of this sort because the set fee could not stretch to cover the many changes. When Dowling gets through with a building plan, however, you can be sure it will pay him off in cold, hard cash. His design ideas are governed strictly by the profit motive.

At the request of an instructor at Columbia architectural extension school, Dowling recently put up the aforementioned Broadway block for a class problem, offering \$250 prize money for the best solution. He visited the class several times and remained unshocked by even the more revolutionary designs while the students, struggling for subway fare, listened agog to his talk of million dollar deals. When the prizes were awarded, three designs were equally good and Dowling remarked, with characteristic, if prudent generosity: "Oh you can't divide \$250 by three—I'll make it an even \$300." And peeled off three hundred dollar bills.

This is typical of Dowling. He likes to think of himself as a bigtime operator. When on the jury for the recent General Motors competition, judged from a Thursday through Tuesday at Yale University, he hired a four-passenger plane to fly him to the beach and back on Sunday. Sick of the Long Island Railroad, he purchased a Grumman Widgeon to cut his summer time commuting from three hours to  $\frac{1}{2}$  an hour. Perhaps the most spectacular feat he ever pulled, and certainly the one of which he is most proud, is the dinner he gave for his father on that gentleman's 70th birthday. The idea, pure Dowling, was to have all the food—chickens, vegetables, fruits, nuts, wine, even drinking water—flown in from his father's birthplace in Mokelumne Hill, Calif. The reasoning behind this stunt was that the old man, having been transported to New York at the age of six months, had never eaten a square meal in his own home town. Dowling managed this manoeuvre through his connections with Amadeo P. Giannini, California financier, who was pleased to take over the responsibility. Dowling was perhaps more pleased over the accomplishment of the impossible than over the dinner itself.

### NIGHT AND DAY

Both Dowling's colleagues and competitors are baffled at the amount of work he gets done and at the innumerable details he can carry in his head. Since taking over the presidency of City Investing, he has made the offices his headquarters, although his other interests necessitate constant gyrations about New York. He usually arrives at 9:30 sharp and if he does not, it is because he is attending a meeting elsewhere. Once in the office a steady schedule of appointments, a constantly ringing

telephone and discussion of current operations with his staff members take up his mornings. Afternoons he attends meetings and makes the rounds of Starrett Corporation, the Emigrant's Industrial Savings Bank, Metropolitan Life or any of his numerous projects that demand attention. Co-workers desiring a word with R. W. (as they fondly call their boss) must often nab him on the way to the elevator, settle their problems before the down-car arrives.

Dowling makes a fetish of health and, like Bernarr MacFadden, applies his theories even in the office. Employees are not expected to report for work until 9:30 and must leave promptly at 5:00 to avoid the subway rush. In summer they leave at 4:00 or earlier because R.W. thinks working in the heat is bad for one. He himself keeps going for nearly a 20-hour day, often taking home scripts for his theater interests to read at night. He was largely responsible for the choice of "Deep Are the Roots," a daring play of race prejudice now running at his Fulton Theatre.

Three times a week, Dowling shoots out of the office at 5:00 o'clock bound for the New York Athletic Club. It is around this venerable meeting place of New York business men that his second and equally intense career revolves. He has played handball there for years as part of a foursome which includes his closest friends—Tommy Jordan (insurance), Murray Vernon (stationery), and Bill Drew (plumbing). After a fierce game they retire to a lounge known as the moaners' corner, where plays are bitterly hashed and re-hashed over glasses of Kalak, a health-giving mineral drink which is supposed to restore tired muscles. Dowling does not drink or smoke. When a prize is in order, he buys a chocolate cake and they play for this reward.

The handball foursome are also self-enslaved members of a solemn institution called the 10-a-pound club. Eleven years ago the four members weighed in and agreed to pay ten dollars for each pound they had gained by the following year. Once Dowling took off ten pounds in a single day to meet the deadline. He hired a room at the club, went through a routine of handball, track, swimming and steam baths that would have killed an ordinary man and emerged groggy, but triumphant.

Until the New York Athletic Club eliminated its weight-lifting facilities, Dowling also did his favorite barbell exercises there. Now he lifts his 250-pound weights at home on one of the terraces of his triplex apartment overlooking Central Park. Summer weekends at Quogue, L. I. a familiar sight is Bob on his beach house porch, solemnly lifting barbells to the delight of a crowd of goggling youngsters.

His other major sport is swimming. Childhood summers spent at Spring Lake, on the Jersey shore, are responsible for his proficiency. There his idea of fun was swimming, Houdini-like, five miles in the ocean with his hands and feet tied. It was Dowling's father, however, who engineered his famous swim around Manhattan Island in 1915. Following in a launch, the 51-year-old man became so

excited that he leapt out of the boat and swam the last four miles alongside his panting offspring. Through the years the legend of this historic swim has grown until many persons firmly believe that Dowling swam around Manhattan towing a rowboat.

For a man as wealthy as he is, Robert Dowling leads an extremely simple life. Even the inheritance of a million dollar estate from his father, a recently upped paycheck of \$39,000 a year from City Investing, salaries from his other executive positions and income from countless personal investments have not shifted his centers of operation. They remain his office, his athletic club and his home. He seldom gives large parties and Saturday nights are spent with his family playing charades. Apparently the accumulation of money which Dowling so persistently and expertly pursues means little to him except as a score-board of his success.

#### MUSCLEMAN MAKES GOOD

To classmates of Dowling at select Cutler Day School on East 50th Street, which he attended from the age of seven until graduation at 18, his rise in real estate seems nothing short of phenomenal. Never good at books, he applied himself feverishly to all sports. After graduation he stayed on at Cutler trying to pass the entrance examinations for Harvard, but more particularly to captain the hockey team. At the same time, he started part-time work at Nassau and Lanning, real estate firm, learning apartment management.

When World War I broke out Dowling and Tommy Jordan, latter-day handball cohort and even then Dowling's closest friend, enlisted immediately in the U. S. balloon Corps. They decided this was the best way to get to France in a hurry, but Dowling was yanked out of training and attached to the Navy on special service. The Navy was working on a scheme for towing mines into German waters by swimming them into position and Dowling's job was to keep in swimming trim and await developments. The proper kind of mine was not found by the time the Armistice was signed, however, so Dowling swam out the war at various athletic clubs.

Thus interrupted, Dowling's business career did not start in earnest until 1919. Harvard was by then a dead issue, and rather than take a made-to-order job in his father's company, the budding real estate man struck out for himself. His first job was with George A. Fuller Co. who were then constructing the Interborough subway. It was Dowling's lot to get releases from the 1200 property owners along the right of way. Dealing briskly with such complaints as seasickness or ringing in the ears ascribed by them to the subway's intrusion, he got every paper signed. After this introduction to real estate he took over management of the Flatiron Building, was elected a director of City Investing, soon became Vice President of Benenson Investing Company. Here he got his solid grounding in building management, land purchase and supervision of new construction. It

stood him in good stead when, in 1933, he became Vice President of Starrett Co. of the oldest and most respected building outfits in New York. In these offices he got a chance to use all the varied facets of estate knowledge he had been so diligent in acquiring over the years.

The time was 1938 and Dowling was in Albany, the New York State housing law changed to let insurance companies invest up to 10 per cent of their admitted assets in rental housing projects. In New York City, Metropolitan Life Insurance Company had recently admitted total assets of nearly \$5 billion and stated it would invest 100 million in housing. Down on Wall Street the Starrett started humming, put Dowling to work. Metropolitan's \$56 million, 40,000 tenant project. The problem: how to make apartments renting for \$12.00 a room pay? Dowling's answer: Shopping centers would bring enough income to act as a buffer for the low rent. Skeptical survey experts of Metropolitan hedged and coughed, their estimates of shop income at 1/8 of what was promised take. Nervous Starrett executives, remembering Knickerbocker VfB flop, cautioned: "Boy, if your foot slips it will be the biggest splash that ever opened to Starrett!"

Dowling's foot did not slip. His detailed cost figures proved conservative. Park Row became overnight the best paying investment in Metropolitan's entire portfolio. It is more than likely that they are now making over \$10 million a year on the stores alone.

Dowling's value in this deal extended beyond the all-important financial angles to include making the street plan and deciding the number and location of commercial buildings. More important, he managed to have the 40 pieces of land necessary without getting into public knowledge. This ability to produce a fait accompli in secrecy is, of course, to his intimate knowledge of Manhattan land. It was used to even greater advantage in Metropolitan's current project, the new residential town of Pleasant Town. Newspaper reporters, something big afoot, questioned tenants on the lower East Side, guessed the purchase to be from 14th Street down to below 1st Street. On May 3rd, 1944, Metropolitan took 135 separate properties from 14th Street to 20th Street. Dowling's adept maneuver had made possible the largest single operation listed in the history of the Manhattan Registry Office.

Dowling seems to enjoy working as a undercover man. He hates publicity, but his long and powerful arm is often found in the pressure groups in New York politics. Commissioner Robert Moses proposed a cent zoning amendment limiting the height of all new buildings except manufacturing and industrial buildings, newspapers reported the decision was delayed by "representatives of savings banks, builders' associations." When the question was raised again months later another tack was tried. Day plans for four new skyscraper office

ags were filed by four corporations, each headed by R. Baylor Knox, Vice President of the City Bank Farmers' Trust Co. of which Dowling is a director. After a lapse of two more months the Citizens Zoning Commission was formed to oppose the amendment and as one of this group, Dowling made his first newspaper appearance with the statement that the plan would be detrimental to the growth of the city for many years, would interfere seriously with the postwar program of construction by private industry and thus would reduce the opportunities for employment that Government and industry were trying to expand . . . Nevertheless, on November 2, 1944, the amendment was finally put through. In his speech of announcement Moses marked Dowling as the power behind the opposition's manipulation. He shouted that Dowling intended to file as many plans as possible; state that if the new bill went through they would have to be abandoned; and then "have the frontiers to go to the labor unions and tell the members of the building trades they would be without work if we carried on with this program." Moses further vented his rage in a letter to the New York Times quoting Dowling's protest and a protest made by his father about the original zoning resolution of 1916, pointing out that they were almost identical.

#### CITY INVESTING UNLIMITED

Whatever justification Mr. Moses may have for his dim view of Dowling, the son is not following his father's somewhat narrow ideas of real estate in his expanding postwar business. Dowling's new plans include investments as far afield as San Francisco, Chicago and Washington. For Macy's he is already working on six new branch stores which will be located outside Toledo, Atlanta and San Francisco and—in the Manhattan area—Flatbush, Jamaica and White Plains. City Investing Company itself will get new offices in the late spring. The staff is in a state of excited anticipation over the employee lounges, company cafeteria and large terraces where they will be able to work during the summer. Plans for four new apartment houses are also on the boards. They feature room-sized terrace porches on each level, divided bathrooms, artificially ventilated interior kitchens and individual thermostat control, all pet ideas of Dowling's. He has worked out what he considers a unique theory of architecture: that the exterior of the building should follow the interior function of the plan rather than dictate it. Competent architects are apt to question the originality of this idea and, in fact, have been known to term his work "Tiffany modernistic." They admit, however, that he is one of the few real estate men heading in the right direction—if he can be led by gentle steps.

Dowling, on the other hand, feels that he knows more about what makes a building pay off than any architect does. Certainly he can support his views with a healthy earning record. If most of Dowling's plans work out—and he's backing his own odds—he will not again have to swim around Manhattan to enjoy it.

## Dowling talks back

### What do you think of the building picture in general?

The prospects for building were never better since the San Francisco earthquake. Government controls and the fact that we are not yet used to the new high prices are holding back construction. Lifting of controls would do the most to promote immediate progress.

### Do you think real estate prices will continue to rise or level off?

In my humble opinion real estate prices will continue to rise for a good many years. We intend to do extensive building immediately.

### We have heard of a strong shift of eastern real estate capital to San Francisco. What is your explanation of this trend?

I know of at least one case where San Francisco is underdeveloped and behind the market in general and has therefore attracted a large merchandising business to making investments there.

### What about urban redevelopment and zoning?

Urban redevelopment is of vital importance and can only be accomplished by the combined attack of Government and private industry. The present Urban Redevelopment Law has had a bad effect on new planning.

My attitude towards Zoning is that Zoning is a wonderful thing! So is the automobile and so is the revolver—it all depends on how you use them. I feel that the proper approach to New York City's needs is based on a factual examination of our present City, such as has been made by Regional Plan Associations and, from that foundation, planning sound objectives which promise a maximum of efficiency, health and happiness. On the other hand, Robert Moses' planning has never had a factual basis, merely that divine intuition of emotional megalomania which so often leads to disaster. Contrary to his opinion, I believe that lots more skyscraper buildings will be built in New York.

### Do you think the atomic bomb threat will result in decentralization?

I am scared to death about the atomic bomb but have no proposals for decentralization. You simply cannot make people give up their habits even with the bomb threat. The population of Vesuvius returns to Vesuvius just as soon as the volcano stops throwing rocks at them.

### What is your position in regard to housing; i.e. the present shortage, rent controls and the part public housing should play?

The solution to providing quick housing to ease the shortage is rehabilitation and subdivision of present buildings.

I believe rent control is absolutely necessary and if OPA is discontinued New York State ought to have its own rent control law and such law should be passed now. Then there should be National legislation to instruct OPA to keep out of States where there are adequate rental control laws.

Public housing is an absolutely essential part of Government just as important as our police stations, schools, fire houses, etc.

### Do you think that life insurance companies' owning and running properties (instead of merely holding mortgages) will result in too much competition?

I think that life insurance companies better neighborhoods by their holdings of owned properties, that they are good competition and very helpful to private property owners. The new law which will permit insurance companies to invest in general business properties is an excellent one and will be very helpful to development of our cities.

### What are the most important angles in making a planned community such as Parkchester a paying proposition?

Probably the many factors are mass production, extraordinarily good housekeeping and the fact that store, theater, garage and service rentals can be utilized as a self-created subsidy to lower tenants' rentals. In other words, the tenants provide their own subsidy, and benefit themselves just as they would in a cooperative society.

### What do you think of shifts in building and land values from one section of a city to another (such as the recent shift up Fifth Avenue in New York)? How can investments be protected from such shifts?

I feel that so long as there is vitality and growth in American cities there will be certain shifts in centers. The shifts cannot be regulated out of existence, although zoning is a restricting and helpful influence. Proper amortization of debt, and proper depreciation charges on buildings will do much to keep the owner on a sound investment basis so as to be able to protect his interests.

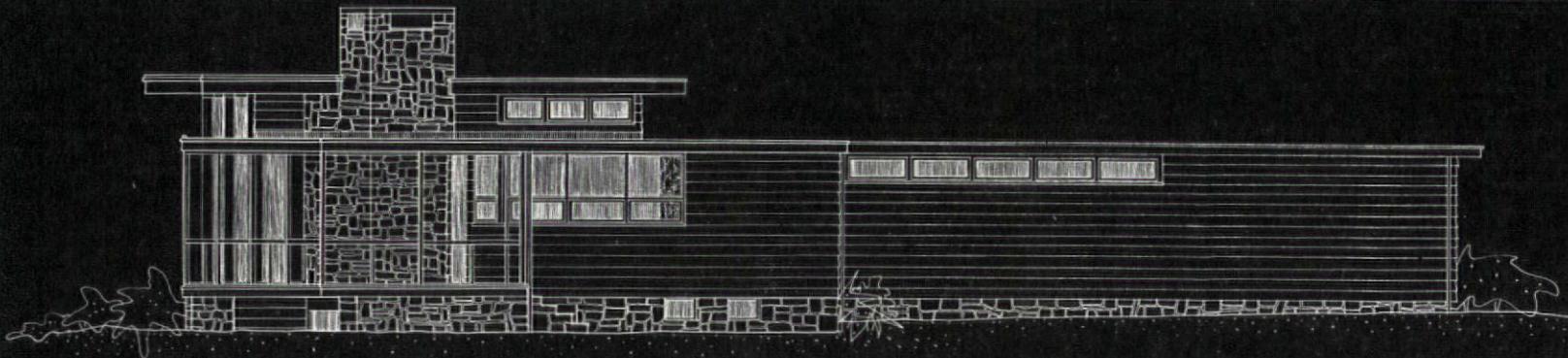
# 41. COUNTRY HOUSE

An in-line plan for rural living gives all living and sleeping rooms an easterly orientation and ideal outlook.

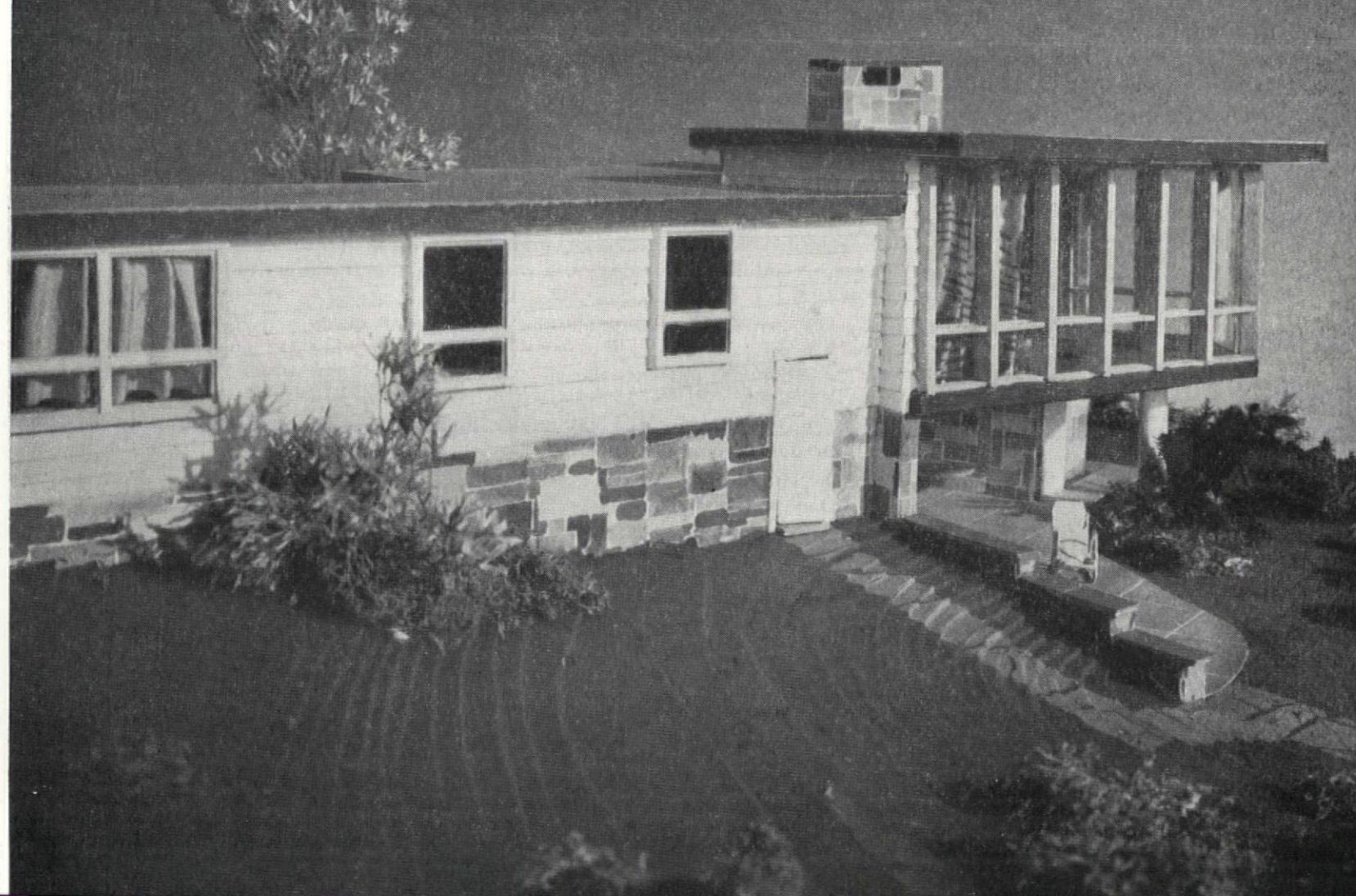
DR. AND MRS. C. HADDON SODEN, Owners

CALEB HORNBOSTEL, Architect

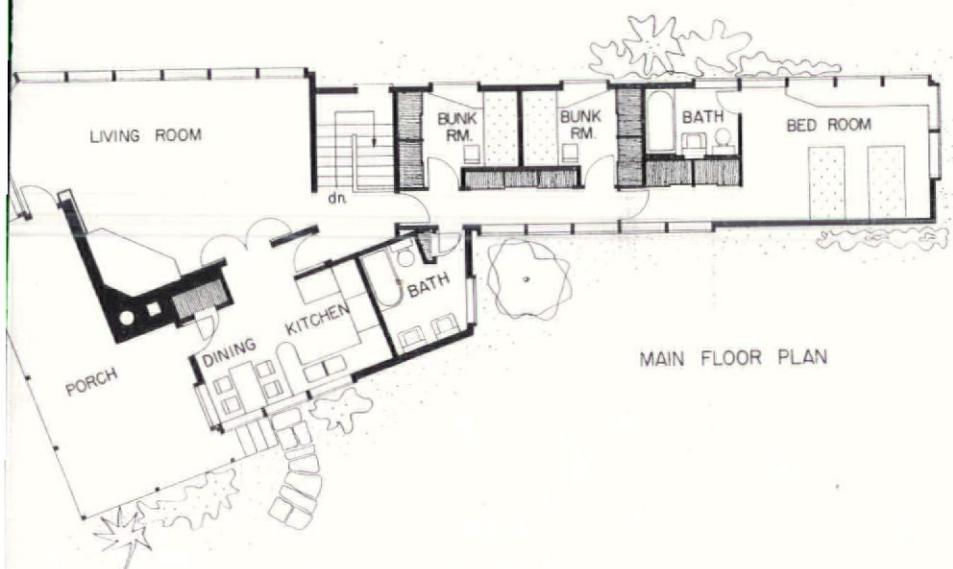
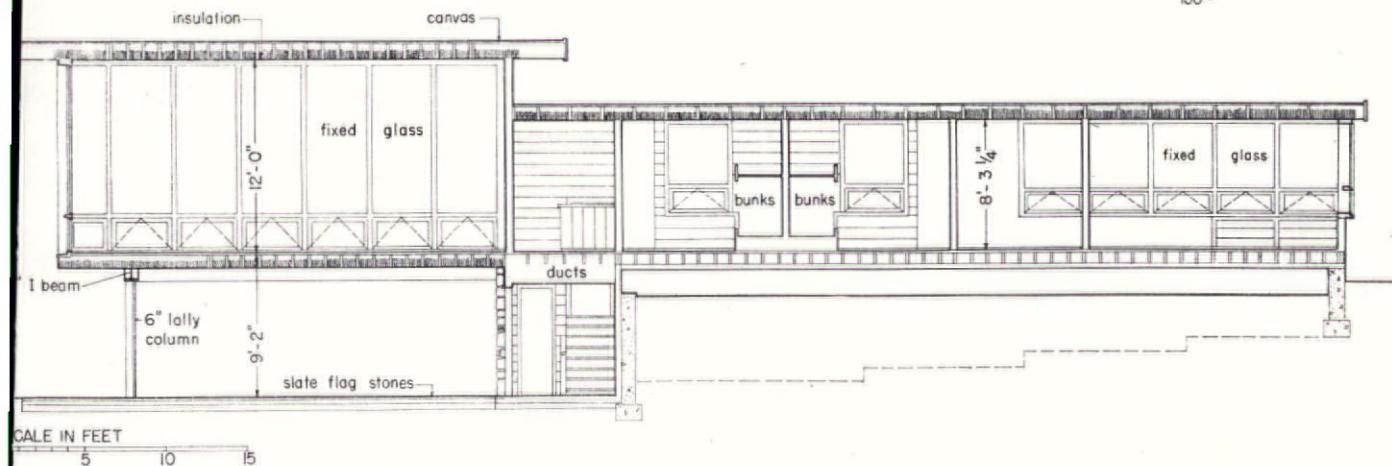
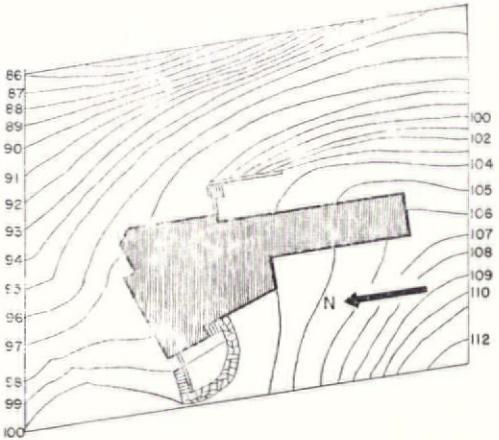
## BUILDING PREVIEWS



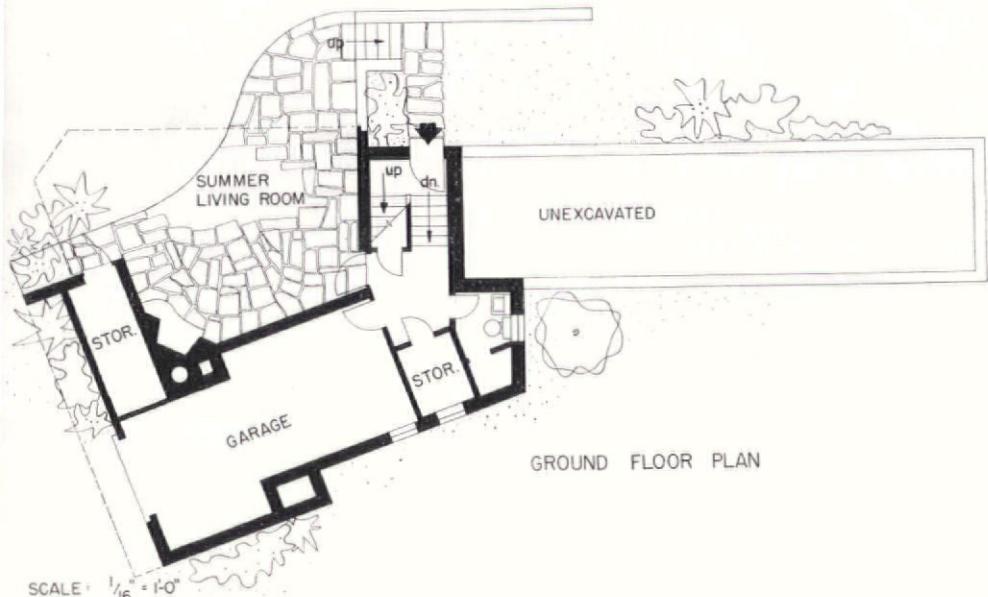
WEST ELEVATION



"The one thing we are most interested in is the view from the living room overlooking the valley," wrote the owner to the architect of this unusual house. The resulting plan eloquently expresses the owner's desire, for the living room opens wide its two solid walls to embrace a panorama of the handsome New Jersey countryside. Orientation to view is matched by equally clever adaptation to the site's contours, the steep slope being used to obtain a lower floor for garage, storage, and summer living room. This additional living room, opening directly upon the lawn yet sheltered by the projecting floor above, is a particularly attractive feature. In plan, the two bunk bedrooms conserve space without sacrificing adequate closet and bathing facilities. Note the double doors opening from kitchen to living room, for use when guests prove too numerous for the dining alcove. Though designed chiefly for summer use, the house is heated and insulated, with double glass in the large living room windows.



BOTH LIVING ROOMS SHARE FINE VIEW



ENTRANCE COURT IS BELOW MAIN FLOOR

# 42. ELEMENTARY SCHOOL

A comprehensive master plan provides logical expansion in unit stages for a suburban community school.

CITY OF ARCADE, CALIF., Owner

GORDON STAFFORD, Architect

Arcade was the center of a community devoted exclusively to farming when the first school was built eighteen years ago. Since that time the community has changed from agriculture to urban activity, becoming a rapidly expanding suburb of the city of Sacramento. Three additions have been made to the original school to absorb new pupils, and 225 students still are inadequately housed. The School Board has decided that an expansion to care for an eventual total of 800 students is necessary, and that this expansion should be accomplished by gradual addition of planned units in an over-all building scheme for the next ten years. The resulting master plan by architect Stafford is presented here.

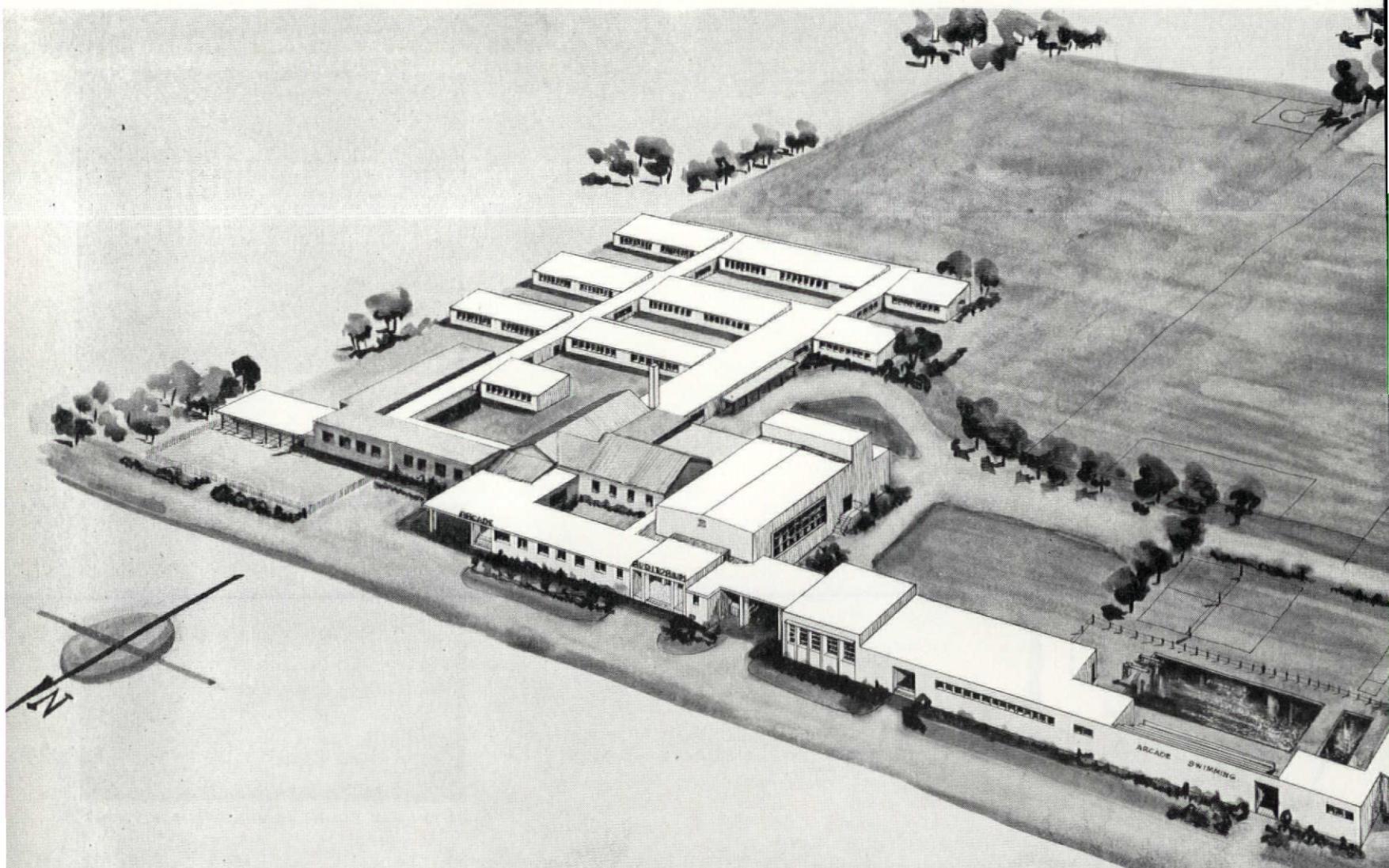
Extensions of corridors of existing buildings determined the location of new class room units, fortunately permitting proper north-south orientation and isolation from street and playground noises. Plan units serving the community needs of adults as well as children have been placed in a linked group to the west of existing structures, to form a screen between the street and the pool and play areas. As over half of the students are transported to school by bus, a bus loading platform and turn court has been provided near the center of the class room units for quick handling with maximum safety.

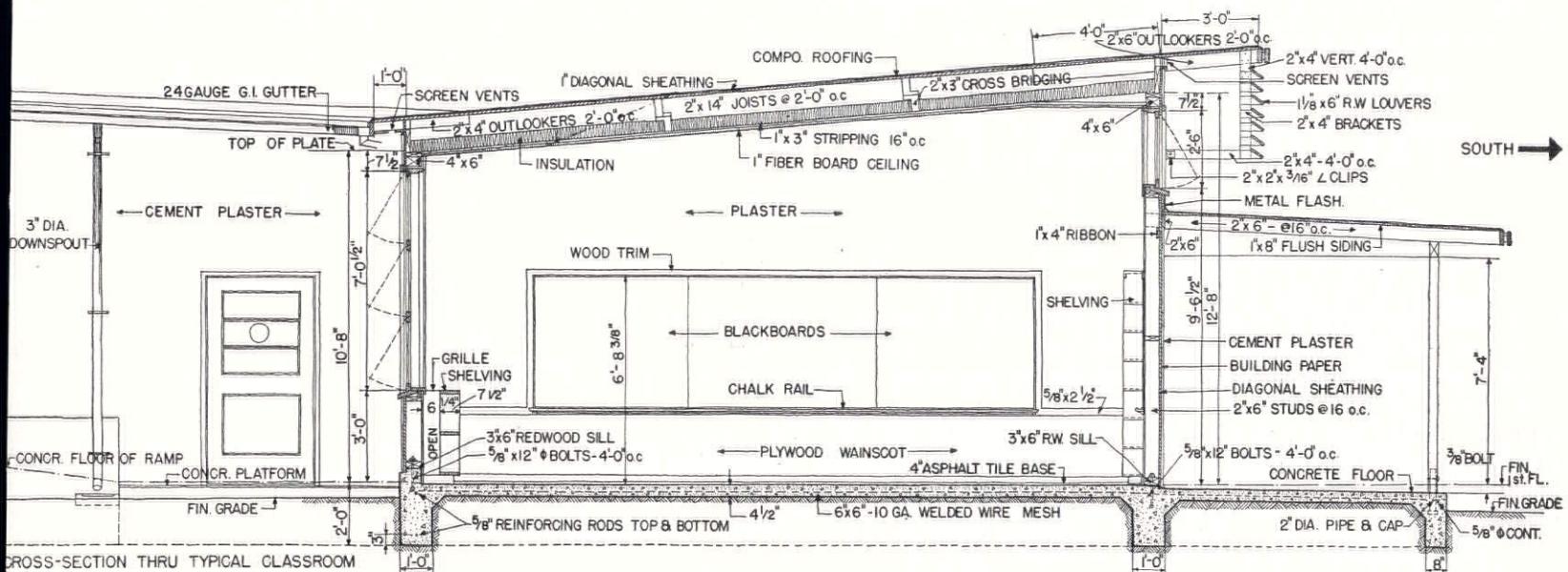
All structures have been designed with maximum economy of materials in mind, using reinforced concrete foundations and floors, wood frame walls and roofs, and open connecting corridors. The first unit of the master plan, consisting of three class rooms and related corridors, is now under construction at a contract price of \$30,925.



EXISTING BUILDINGS, VAGUELY MEDITERRANEAN

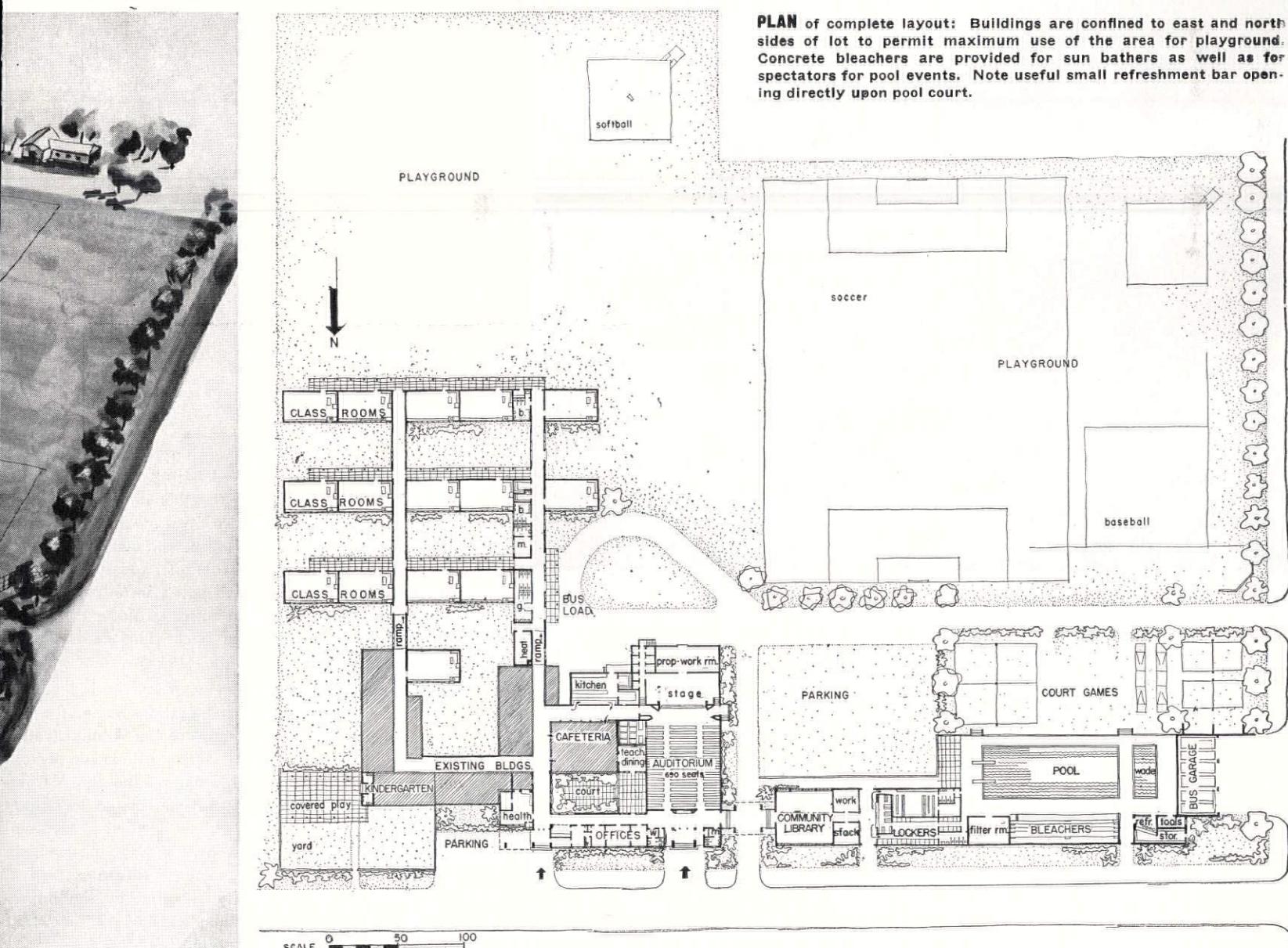
AIR VIEW OF EVENTUAL LAYOUT OF BUILDINGS AND GROUNDS SHOWS EXISTING SCHOOL STRUCTURES IN GRAY, FUTURE EXPANSIONS IN





**SECTION** through class room unit: Large windows at left are oriented toward north for constant and even illumination. Light from south is admitted by band of windows above corridor roof, protected from direct rays of sun by fixed exterior louvers. Ramp in corridor at left leads into existing school building.

FACILITIES ARE TO RIGHT



# 43. PORT OF AERIAL EMBARKATION

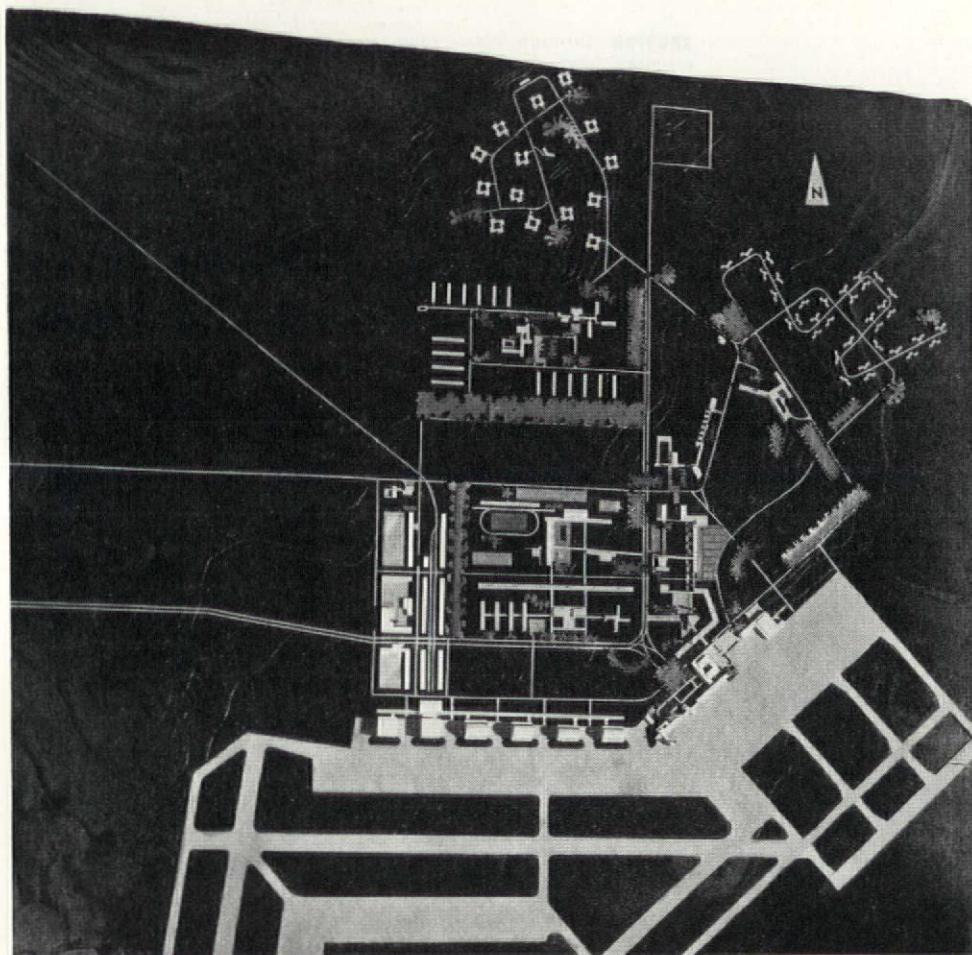
A permanent base for military air transportation sets a timely design standard.

AIR TRANSPORT COMMAND, U. S. Army Air Forces, Owner

CHARLES M. GOODMAN, Architect

"Military building plans always seem to be in a state of change, due to the absence of the profit motive to discipline management and the usual pressures that thrive in military circles," says Mr. Goodman, former Head Architect for the ATC. Fortunately, this study for the postwar development of an existing Air Forces base on the Pacific Coast was projected from a program of operational requirements which were frozen logically long enough to allow a solution in complete form to be presented without change.

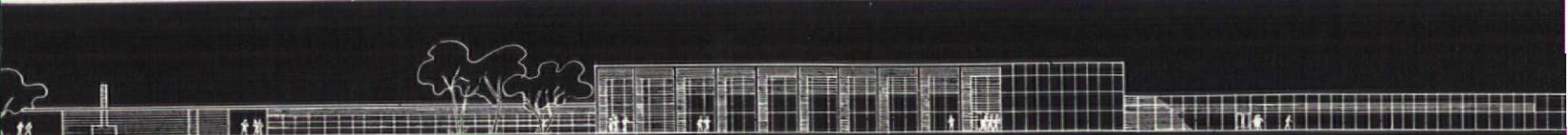
As temporary construction permits removal of all buildings except hangars on the existing site, the architect has abandoned the former haphazard and divided layout. Addition of a second NE-SW runway offset from the present one provides simultaneous landings and takeoffs, and results in minimum taxiing of all planes to and from a terminal center of the airport. About this center the base has been organized according to zones of activity.



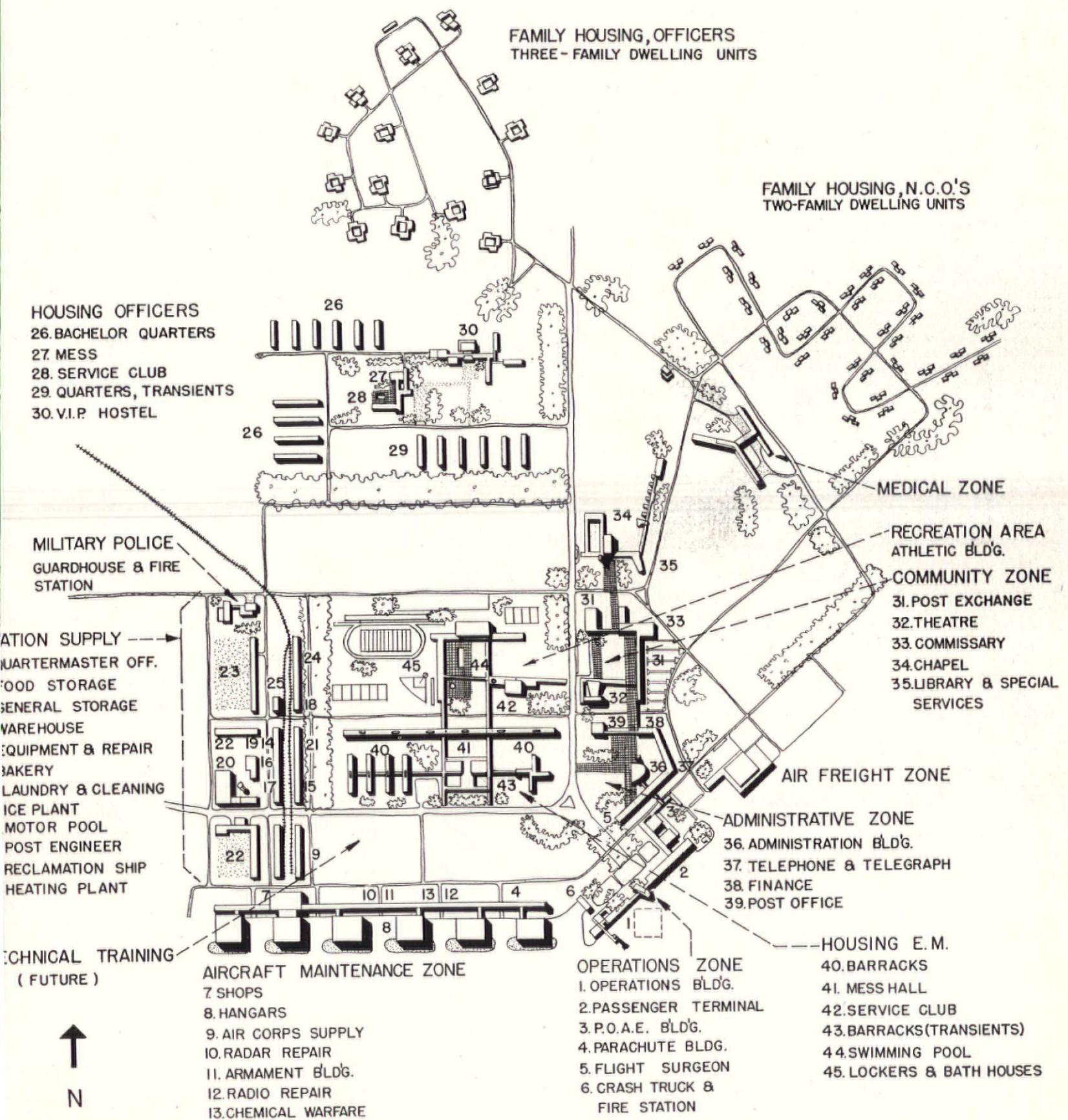
## SITE PLAN

The site, although ideal for air approaches and flying weather, is "flat and unvaried with a singular lack of large scale vegetation." To offset this natural monotony, the buildings are arranged to open toward a series of interconnecting park areas, plazas and courts. Walking is considered "a pleasant recreational activity combined with business," covered ways being introduced in the zones of intensive pedestrian activity. Motor traffic and parking is relegated to the back sides of buildings wherever possible.

Division of the base into zones of activity is logically conceived. Adjacent to the Operations Zone, the terminal focus of the whole plan, are the Administrative zone for "business," the EM Housing Zone for personnel, the Air Freight zone for cargo, and the Maintenance zone for plane repair. Beyond this group radiate related but less vital zones, chiefly devoted to the complete community life required at a large base. Note that all zones have adjacent areas for future expansion, thus providing the flexibility required by the unpredictable growth of air transport and the constant changes in military organization.



NORTH ELEVATION OF ATHLETIC BUILDING: GYMNASIUM, CENTER; BARBECUE AND BOWLING, LEFT; SQUASH COURTS AND LOCKERS, RIGHT



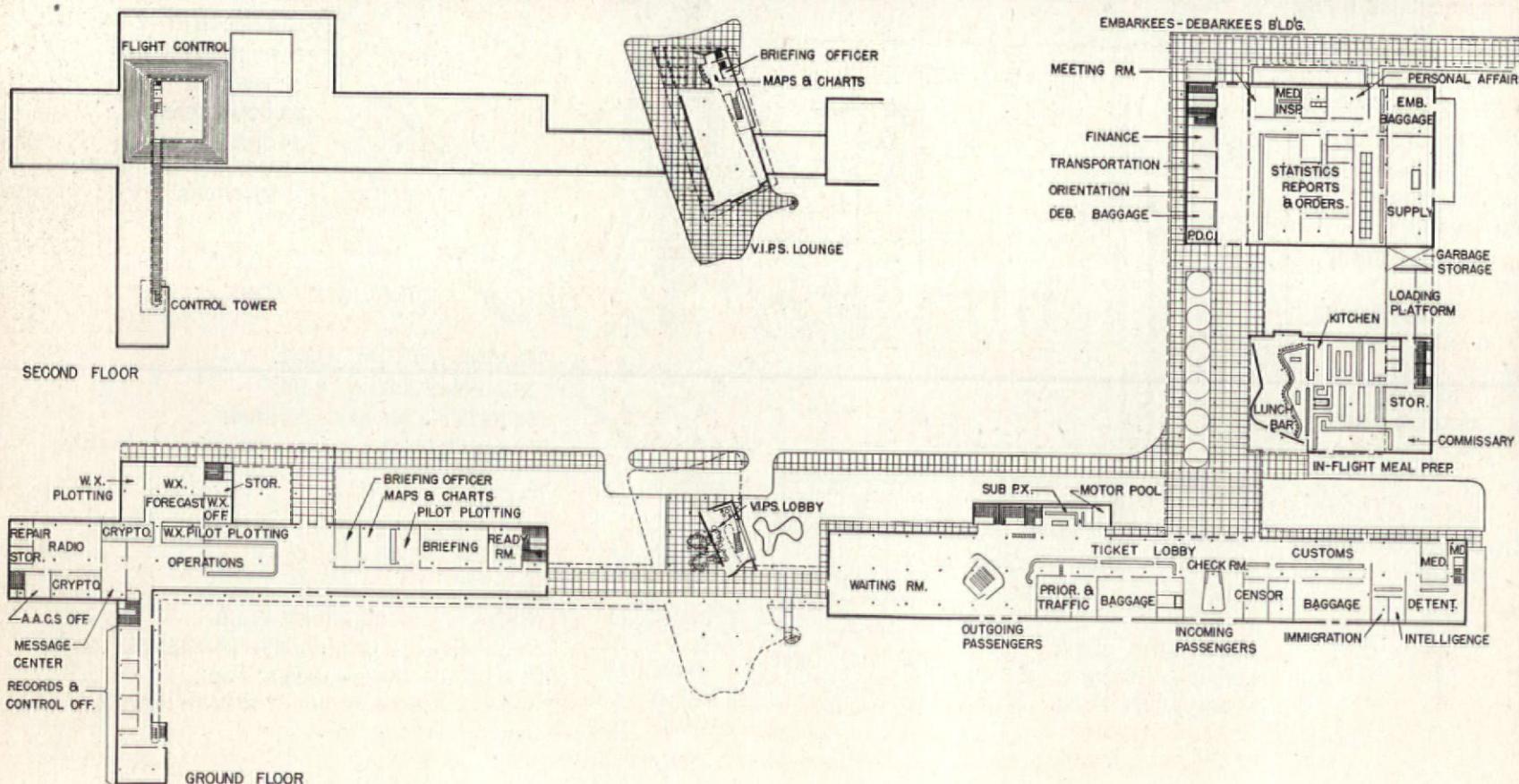
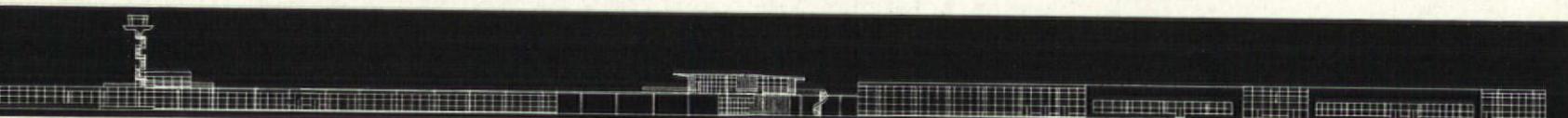
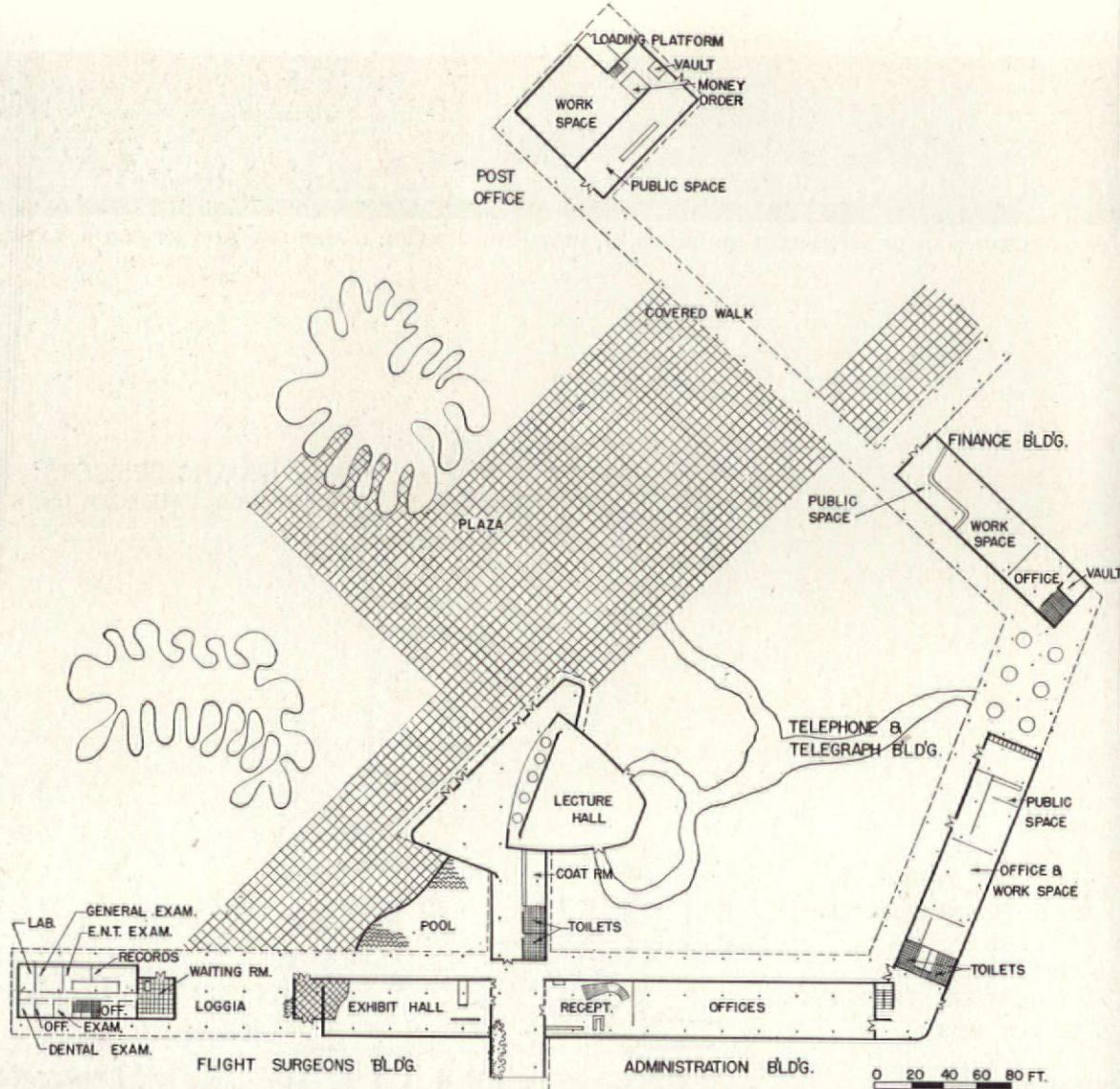
# PORT OF AERIAL EMBARKATION

## ADMINISTRATIVE ZONE

In this area joined to the Operations Zone by a covered way are conducted the management functions of the whole base. Buildings are a system of reinforced concrete columns and slabs of several standard spans with non-bearing enclosing walls of materials selected for various purposes. Interiors have flexibility provided by floor heating and interchangeable partitions.

## OPERATIONS ZONE

Five linked units constitute the control center for the port. Control over all planes leaving or arriving at the field is lodged in the Operations Building, with its weather, communications and pilot briefing facilities. The Terminal Building has space for the waiting, ticketing, and baggage handling of departing passengers, and for customs and immigration procedures and baggage handling of arriving passengers. Processing of mass shipments of personnel takes place in the Embarkees-Debarkees building, to keep the Terminal from being swamped. A Lunch-Bar is provided for the use of all, and Very Important People have an exclusive lounge overlooking the field.





## TWO WARTIME COMMUNITY CENTERS

whose experience records offer valuable

information on the structural and operational requirements for this type of building.

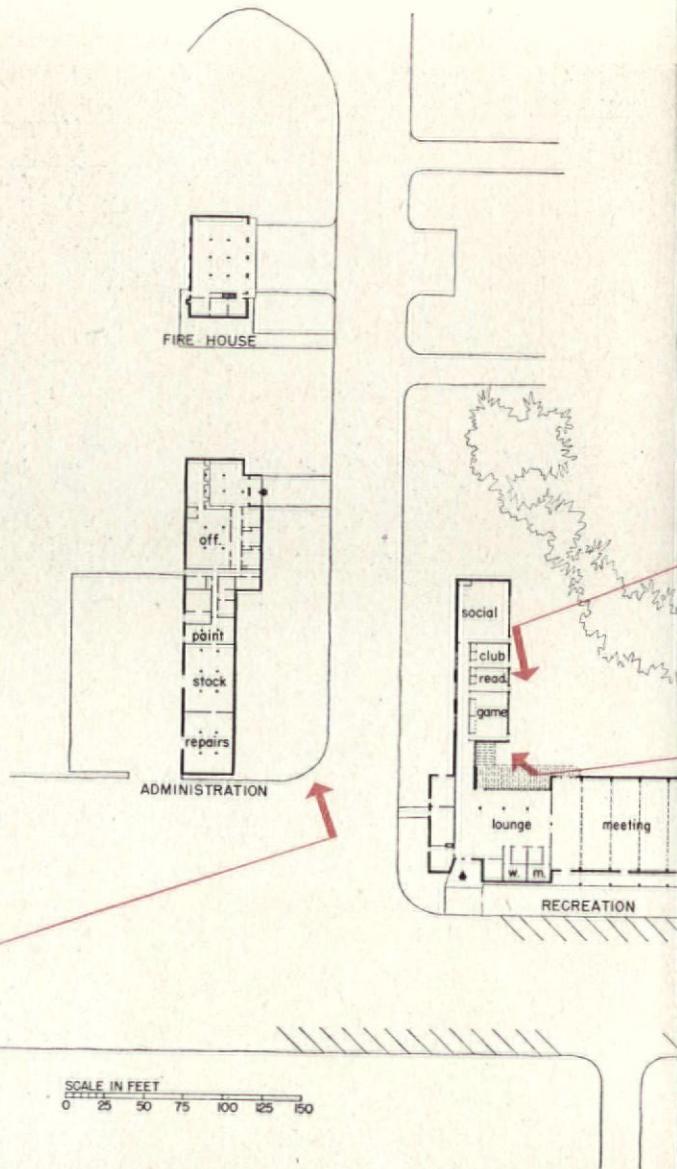
With the importance now attributed to neighborhood planning plus invaluable architectural experience gained through war housing problems, it looks as though community centers will become an essential element of the national building pattern. Before the war relatively few installations of this type existed and little was known about their requirements. However, the vast number erected to serve temporary and permanent housing projects have furnished a definite basis on which to judge success or failure. The two examples presented here, one in Washington designed by Pietro Belluschi, the other, a job by George Howe and Louis I. Kahn in Pennsylvania, were selected because they represent two distinct types of community centers—commercial and non-commercial.

# BAGLEY DOWNS, VANCOUVER, WASH.

PIETRO BELLUSCHI, Architect

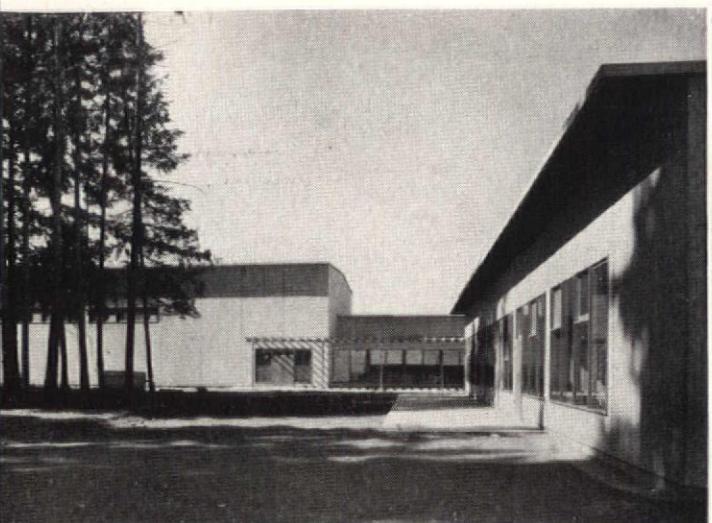
This commercial and community center serves a 2,100 unit temporary housing project called Bagley Downs. Although Vancouver was before the war a small town across the river from Portland it has, since the days of "national defense" boasted a large Kaiser shipyard and numerous complementary types of small industry and commerce. The site totals 155 acres located at considerable distance from the town's central shopping facilities. For this reason the community center was divided into four distinct building groups: administration, recreation, commercial, fire station. Perhaps the most astounding feat in connection with the job is that architect Belluschi designed and laid out 418 row houses plus the facility buildings in two weeks flat. Though Bagley's present population has dwindled to one quarter of its original size, the community buildings have seen some hard use (at peak occupancy foot traffic through the recreation building alone totaled 10,000 per week), enabling the local housing authority to make the reliable appraisal presented in the experience record on the facing page.

AREA BETWEEN ADMINISTRATION AND FIREHOUSE IS FOR PARKING

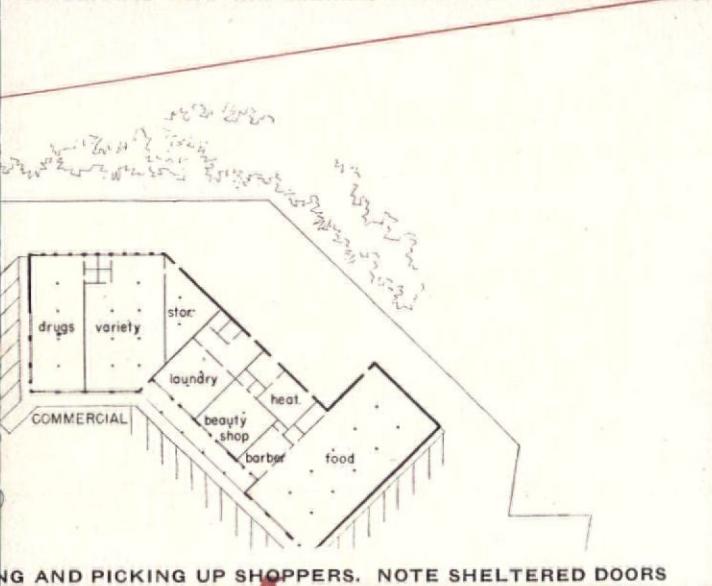


RELATION OF COMMERCIAL BUILDING GROUP TO ADJOINING BLOCKS PROVIDES GOOD PARKING SPACE AND A PAVED CRUISING AREA FOR

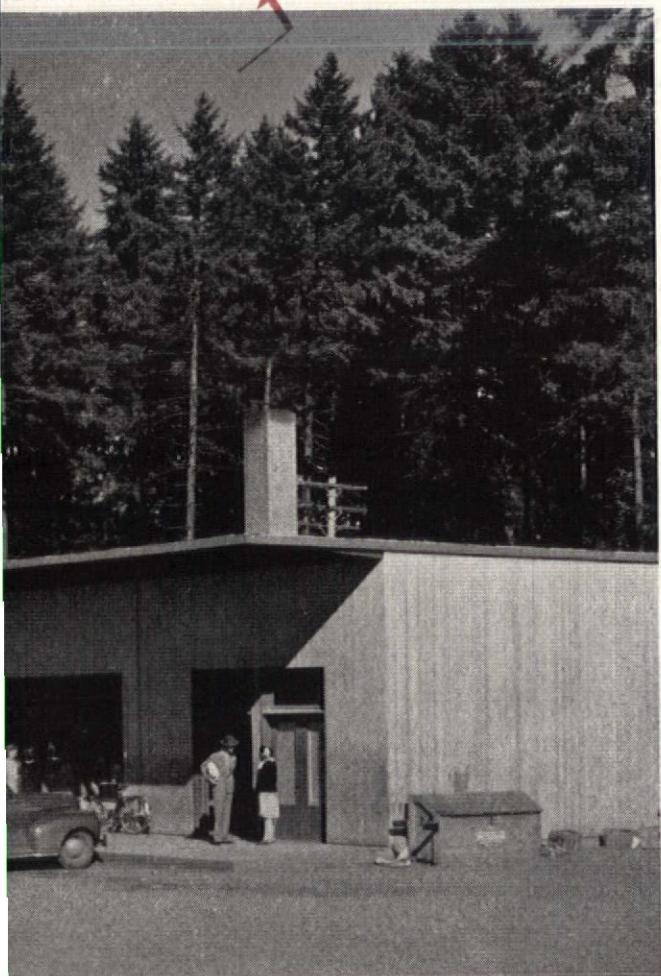




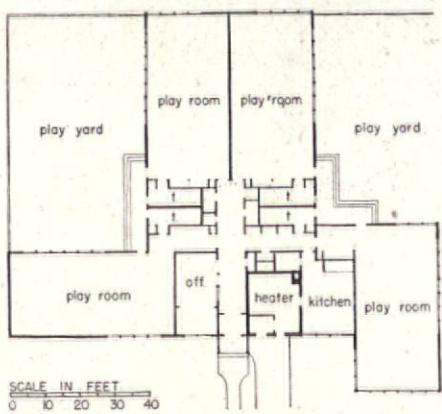
LOUNGE HAS TWO EXPOSURES, OCCUPIES ANGLE OF L FORMED BY ADMINISTRATION BUILDING



WALKING AND PICKING UP SHOPPERS. NOTE SHELTERED DOORS



NURSERIES provide elaborate facilities for child care. Pictured above are two of three units added after completion of the other facility buildings.



## EXPERIENCE RECORD

**ADMINISTRATION BUILDING:** The project manager, Clyde Gardner, has found this building adequate in every way. Except for the addition of asphalt tile as a floor covering and the removal of a vault from the center of the floor, no changes were made.

**FIRE STATION:** Chief W. D. Robertson finds that his station has done an admirable job serving a total of 5,600 dwellings. His only criticism is the inclusion of a sun porch because of the limited time during which it can be used.

**RECREATION BUILDING:** According to recreation manager, Walter Pollack, the most appreciated features of this unit are its small game rooms with individual entrances and the small meeting room which proved highly successful for lesser community gatherings. The large gymnasium with its broad stage, ample storage space for chairs, adequate exits and covered sidewalk approaches was also highly praised. Though the building was designed for adult use and decorated in pale colors, it was discovered that 75 per cent of the patrons were children who managed to give the interior some pretty rough treatment. Strangely enough, the lobby was found to be too large. Experience showed that people simply refuse to use such a space for sitting, no matter how attractive it may be. They show definite preference for smaller, more private spots, hence it was suggested that the size of lobbies be determined solely by the intermission crowds they will be called on to accommodate. Large expanses of glass in both the lobby and the gymnasium proved hazardous—so much so that the windows of the latter had to be boarded up.

**COMMERCIAL BUILDING:** The seven stores in this unit were limited to the type of enterprise deemed essential by the FPHA. They were: food, drugs, essential drygoods, shoe repair, laundry, dry cleaning, barber and beauty shops. Despite the restrictions on merchandise sold, they did a collective business of over \$1,000,000 annually. The only inadequacy of the commercial center was the lack of garbage disposal facilities. As for customer reaction, Josephine Lund, director of the unit, is convinced that once a housewife has been able to do all her shopping under one roof, she will always prefer this convenience to purchasing in individual, scattered shops.

## CONSTRUCTION OUTLINE

**FOUNDATIONS**—concrete. Water-proofing—asphalt emulsion under asphalt tile. **STRUCTURE:** Exterior walls—Creo-Dipt shingles, Creo-Dipt Co., studs, sheathing; inside—Gyp-board, U. S. Gypsum Co. Floors—concrete, Mastipave, Cott-A-Lapp Co. **WINDCWS:** Sash—wood. Glass—crys-tal. **HEATING**—forced warm air stoker fired furnaces; in dwelling units ranges with chimney heater.

**Electrical Engineer:** George Pettingell  
**Plumbing & Heating Engineer:** Thomas Taylor

**Structural Engineer:** Miles K. Cooper  
**Roads, Sewers and Water:** R. G. Anderson & Associates

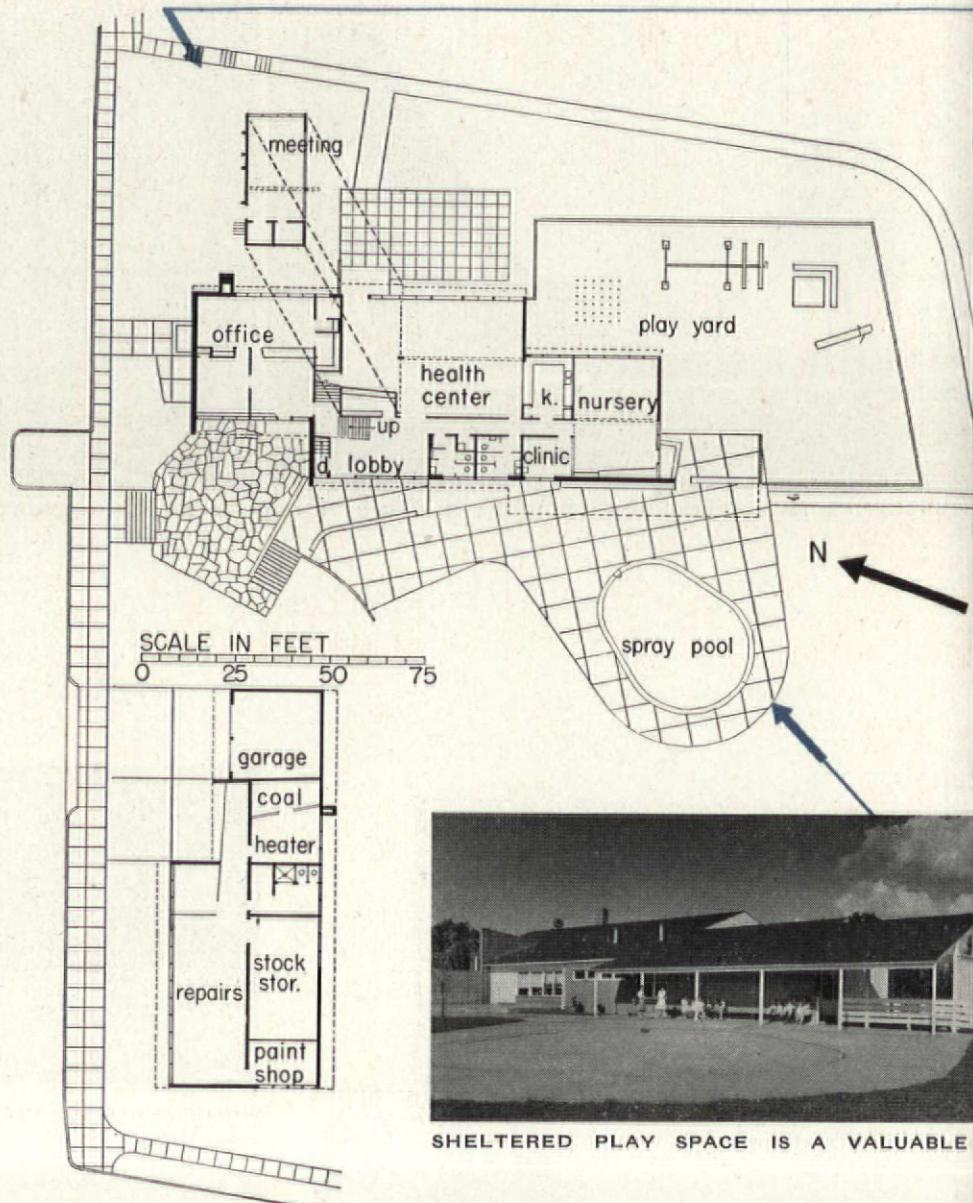
**Landscape Architect:** Sheldon Brumbaugh

# PINE FORD ACRES, PA.

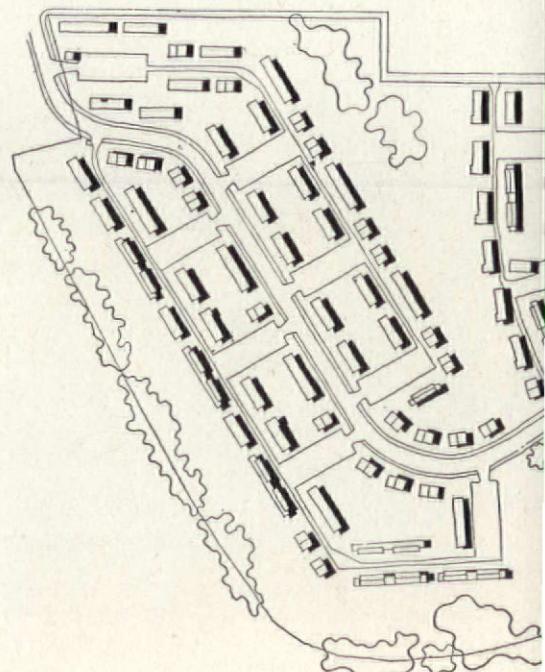
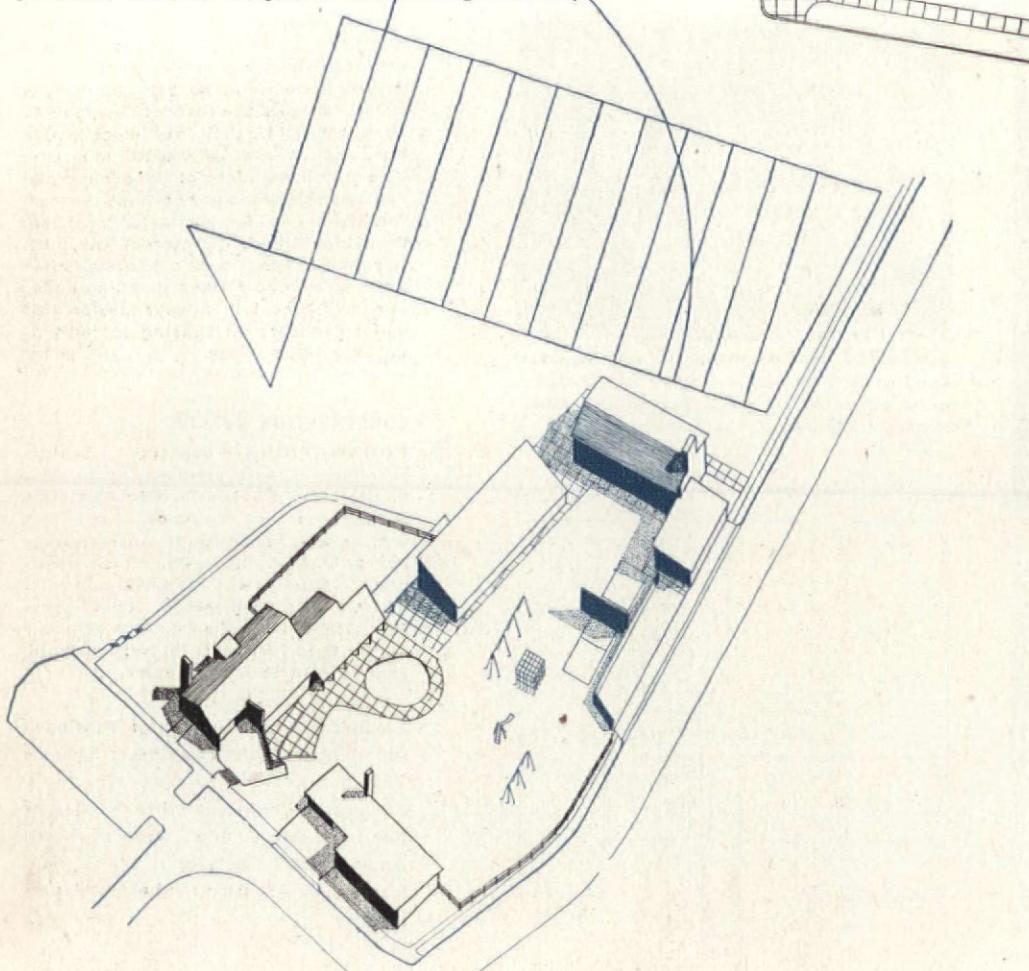
GEORGE HOWE, LOUIS I. KAHN, Architects

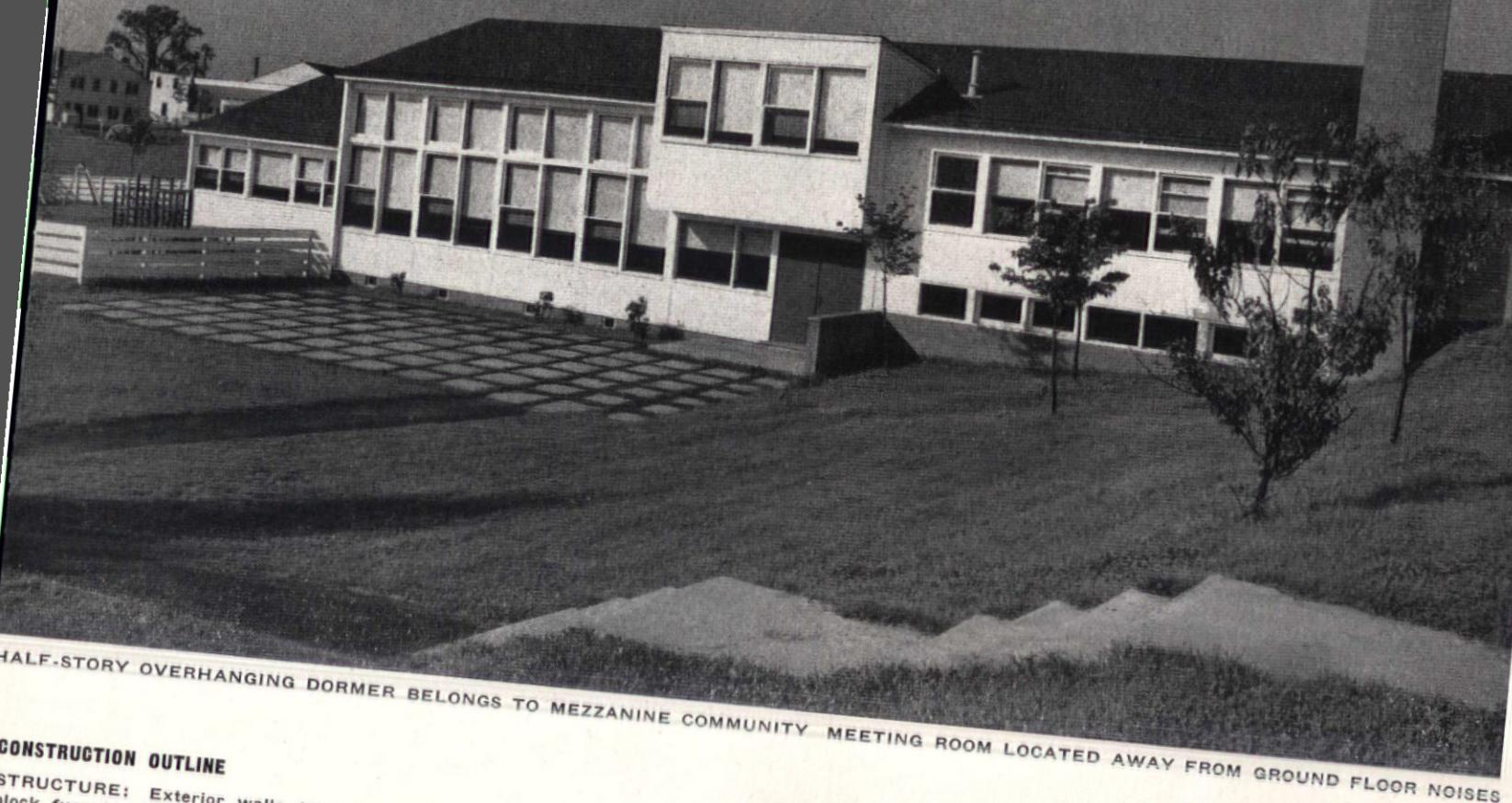
The second community building near Harrisburg, Pa., serves a much smaller project (450 families) and offers fewer facilities. Actually it is more of a child care center augmented by a neighborhood auditorium than a community building in the true sense of the word, a condition which accounts for the location of the meeting room a half story above the other rooms and away from ground floor noises. The majority of the tenants at Pine Ford Acres are employed at the Middletown Air Technical Service Command while the remainder work in adjacent steel mills, for the Pennsylvania Railroad and allied industries. Their incomes average about \$1,460.

The experience record shows that, in contrast to Bagley Downs, where tenant activities are extensively organized, the occupants of Pine Ford Acres take little interest in their community center or the potential facilities that it offers. According to the report of the Harrisburg Housing Authority, the center is found to adequately serve the project needs though they are fully aware of the tenants' disinterested attitude. (The only structural shortcoming they found was the size of the clinic which had to be moved into another, larger room.) In view of these criticisms, the architects decided that the center was simply too small for the community and that with additional facilities, occupants, both old and young would enter into the spirit of community participation with increased zest. The expansion which they proposed is illustrated below. This would involve converting the present buildings exclusively to administration and maintenance and adding new structures for public use. Structurally, the proposed buildings are elaborate. They include a nursery building, a rough playhouse for movies and indoor athletic activities during bad weather, a storage building with adjoining parking area. To augment the indoor space are two handball courts and a ball field, proposals which met with particular favor on the part of the Housing Authority.



SHELTERED PLAY SPACE IS A VALUABLE

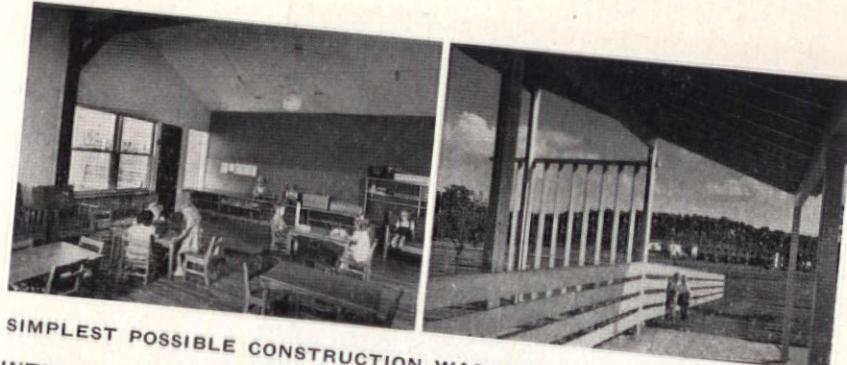




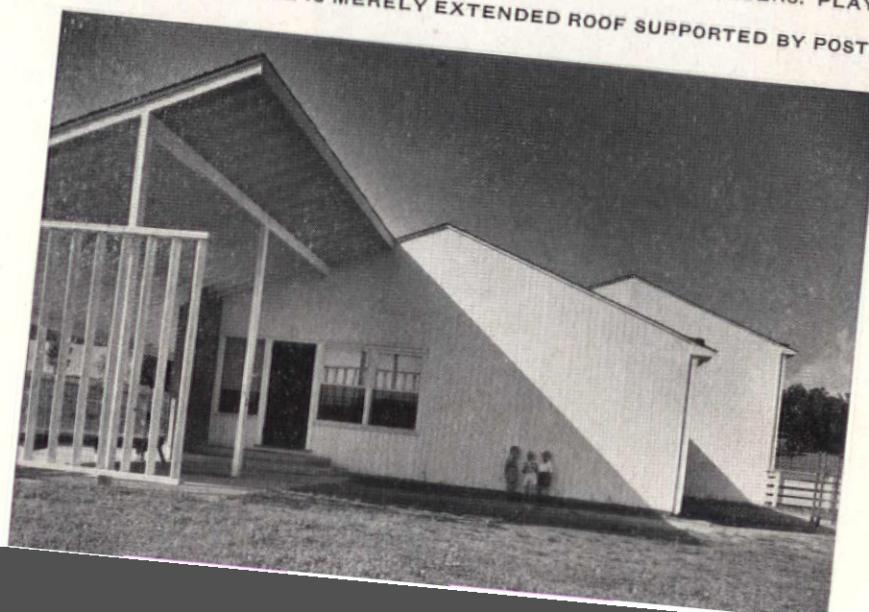
HALF-STORY OVERHANGING DORMER BELONGS TO MEZZANINE COMMUNITY MEETING ROOM LOCATED AWAY FROM GROUND FLOOR NOISES

#### CONSTRUCTION OUTLINE

**STRUCTURE:** Exterior walls (masonry)—face brick, backup block furred and plastered; (wood)—studs, T. & G. V-jointed vertical siding over sheathing. Interior partitions—wood studs, gypsum lath and plaster. Floors—double wood. **ROOF**—asphalt shingles or 5-ply built-up. **WINDOWS:** Sash—wood, double hung and casement. Glass—double strength, quality B and clear sheet. **FLOOR COVERINGS**—linoleum. **PLUMBING:** Soil pipes—cast iron. Vent pipes—cast iron and galvanized steel. Water pipes—galvanized iron. **HEATING**—forced warm air system.

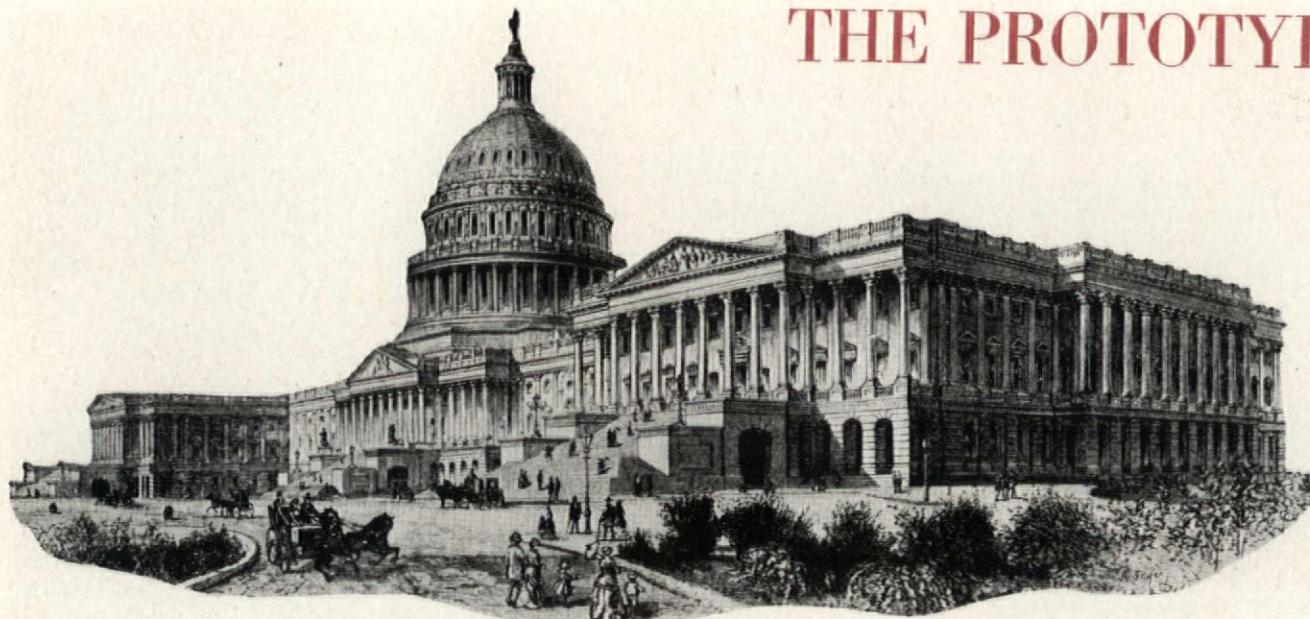


SIMPLEST POSSIBLE CONSTRUCTION WAS USED AT PINE FORD ACRES. INTERIOR OF NURSERY SHOWS EXPOSED STRUCTURAL MEMBERS. PLAY-GROUND OVERHANG IS MERELY EXTENDED ROOF SUPPORTED BY POSTS



# THE PROTOTYPE DESIGN

phenomenon of a world

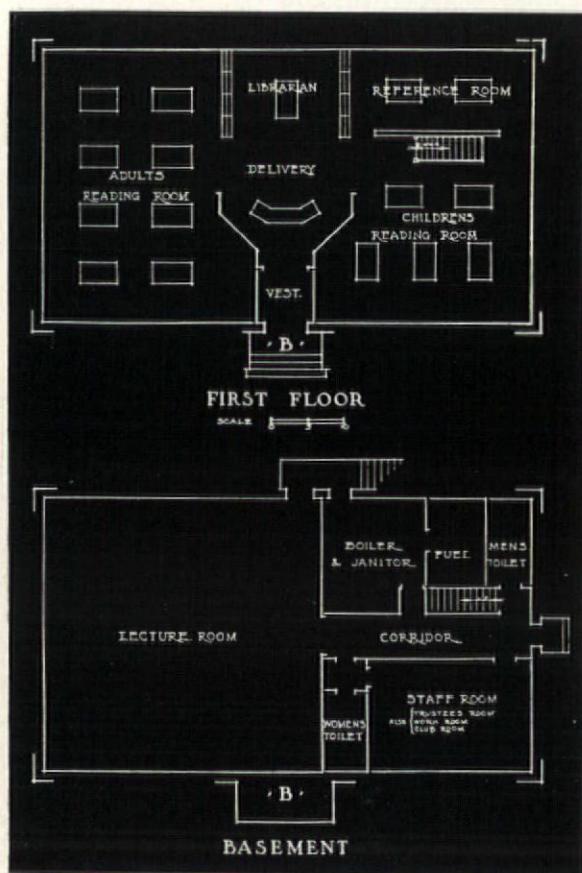


RHODE ISLAND

Through all its many metamorphoses—as the young physician William Thornton initially designed it, as he and Latrobe rebuilt it after the British burned it, as Mills and others altered and enlarged it—the Capitol at Washington had always had a decisive influence on the design of our public buildings. Three of its host of progeny are the state capitols shown at right.



However distorted or inept, the reflected image of H. H. Richardson's Trinity Church in Boston continued to appear for decades after its completion. His esthetics had some special dimension, his planning some special quality, which made them irresistible to his contemporaries. There is scarcely an American town which does not still bear witness to this fact.



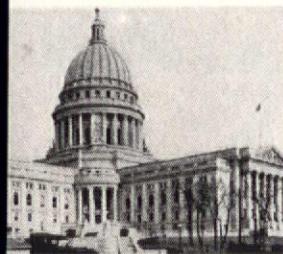
COLORADO SPRINGS, COLO.

TOTTENVILLE, N. Y.

OCALA, FLA.

A deliberate effort to use the prototype design to influence a certain type of building, the diagrammatic plan at left is one of six which Mr. Andrew Carnegie was distributing to would-be library builders in 1905. Already these prototypes had been many times revised; they were subsequently to be further improved. How concrete and inescapable was the impact of these drawings is obvious in the five Carnegie libraries shown above.

g needs are too intricate, precise and changing to rely upon the slow and accidental spread of useful architectural ideas.

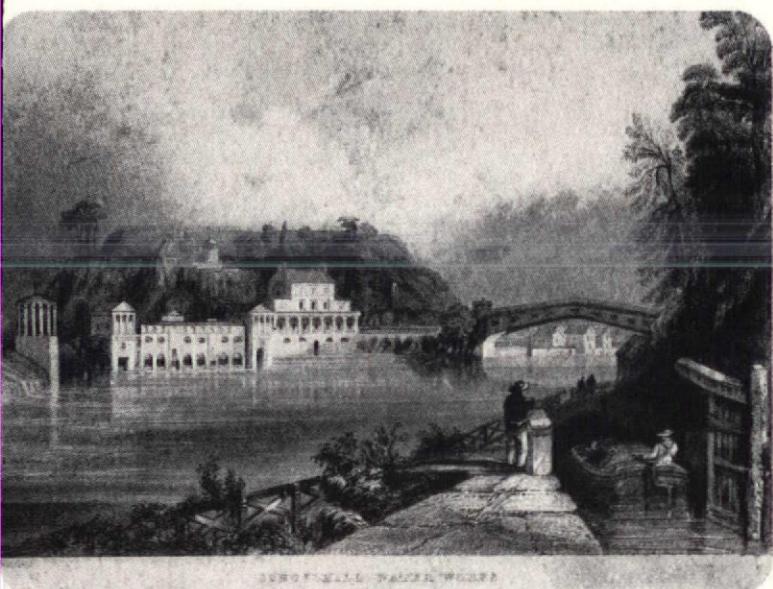


WISCONSIN



UTAH

In this idyllic old print lies a remarkable panorama of nascent American engineering—a whole system of canal and locks, a bridge, dam and pumping station, conduits and reservoir. Thus Philadelphia's Waterworks, in the 1820's, already displayed a scale and comprehensiveness which was to characterize much of our public works and serve as model for old world and new.



PHILADELPHIA WATER WORKS



T. PETERSBURG, FLA.



SOUTH ORANGE, N. J.

There was a time when architects were engaged only to design actual buildings, when competitions were held only to select actual architects for real projects. Today, things are quite otherwise. Now many a manufacturer engages industrial designers, many a public agency employs architects, to evolve designs never intended to be built. And few of the competitions of recent years have been for buildings which will ever see the light of day. The technical press is full of such drawings—florist shops and solar houses, clinics and hardware stores. The sponsors and motives may vary but one fact is keystone to them all: they are prototype designs, consciously produced for the purpose of winning friends for the concepts they embody and of influencing people to copy them.

In a very real sense, there is nothing new about prototype buildings. The shadow of the Capitol at Washington has fallen across the drafting board of any architect who ever designed a state capitol or city hall. The Philadelphia Waterworks was the first of its kind in the new world and so precisely filled a current need that it was widely copied both here and abroad. And before the echoes of his work were finally lost in the clatter of fin-de-siècle eclecticism, the Protestant churches of Henry Richardson had produced a vast progeny across the land.

But however definite their impact upon design and designer, the historic role of such prototype buildings was casual, unplanned, accidental. America in those days could trust to chance to produce new designs and to fate to scatter their fructifying effects. It was only as the century closed and the tempo of life accelerated, that such leisurely methods of disseminating new ideas became inept and wasteful.

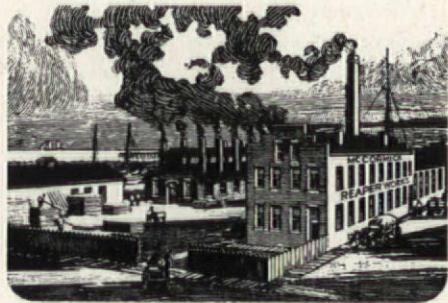
The concept of a systematic development of prototype designs—consciously aimed at raising the whole average level of one type of building—apparently began with Andrew Carnegie. There is no evidence whatever that that canny Scotsman aspired to a dictatorial role in architecture. But you cannot subsidize the construction of 1,681 libraries without learning a lot about the field. And you cannot give away \$41,233,853.47 without at least some system to the giving. Thus in 1905, after fifteen years of dealing with architects and library committees, Mr. Carnegie was able to publish six prototype floor plans. These were to be considered only as guides—though, as he warned “it should be noted that many of the buildings erected years ago, from plans tacitly permitted at the time, would not be allowed now.” Mr. Carnegie had found that small town library committees, “lacking time or opportunity to obtain knowledge of library planning,” were often led to accept wasteful designs from “architects who are liable, unconsciously no doubt, to aim at architectural features and to subordinate useful accommodations.”

Mr. Carnegie subsidized his last library in 1917 and his prototypes are long out of date. But he established a pattern of great significance—substituting for the old fashioned process of trial and error the concept of *design standards* which are constantly revised upwards in the light of common experience. Today the prototype design is a widespread phenomenon, as the free-lance professional is only too well aware. In such circles there is a tendency to view this trend with alarm, lump together all such work as mere “plan books” or “stock plans.” Yet most prototype designs are not working drawings and are not intended to serve as such. They are rather attempts to summarize and synthesize at the most up-to-date level all the design factors which are common to a given building. In view of the constantly increasing specialization in buildings of all types, the amount of knowledge required for the competent design of any one of them is staggering. And the blunt fact is that none but the largest independent office has either the personnel or resources for the exhaustive research necessary to all of them. In this light, at least, the prototype appears far more as promise than as threat. Two of the most recent examples—one from private industry and one from a public agency—are shown on the following pages. They represent, on the one hand, a condensed version of what farmers, dealers and manufacturers find most desirable in agricultural machinery retail outlets; and on the other what working librarians think small town and rural libraries should include. Thus both contribute importantly to specialized fields, where such information had been sadly lacking.

# INTERNATIONAL HARVESTER

launches prototype designs for a "base of operations" for its 8,000 retail dealers.

RAYMOND LOEWY ASSOCIATES, Designers



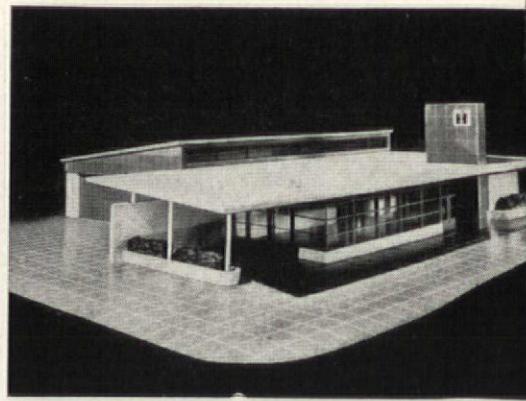
Original McCormick plant, 1847

When he moved his factory from Virginia to Chicago in 1847, Cyrus Hall McCormick showed that he was already aware of certain problems of distribution and merchandising. His business was making mechanical harvesters and—in the sixteen years since his first model—most of the market for his product had moved over the mountains into the Middle-west. In a sense, therefore, the establishment of his new factory and retail store in Chicago merely anticipated the problems of his corporate descendants a century later. For today the International Harvester Company still has the problem of following a market—larger, more competitive and much more complex than ever before. To get its products into the hands of American farmers, it has set up a huge network of some 8,000 retail dealers. And to keep these dealers prosperous and happy, the company operates a large-scale program of counsel and advice on merchandising and service programs, retail management, credit policies, selection and training of personnel, etc.

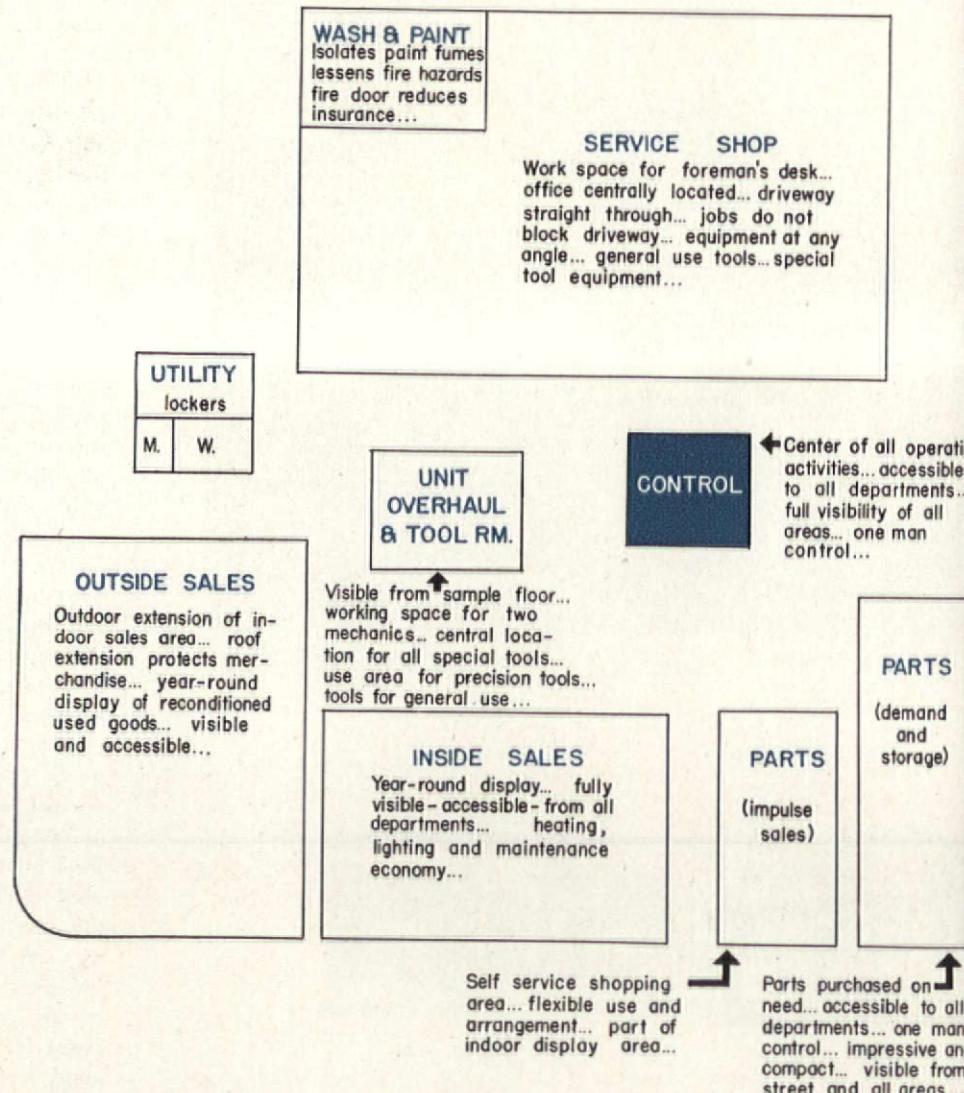
It was as a logical extension of this program that International Harvester several years ago set the Raymond Loewy Associates to work on systematizing and standardizing the design of dealer buildings. However, as Mr. Loewy put it, "It soon became apparent that merely to design a building having certain architectural characteristics which would stamp it as a Harvester dealer's would be an inadequate solution." The problem was actually one of "providing a home—a 'base of operations'—for the various functions involved in running a dealership." A detailed analysis of these functions led instead to the development of the four prototype designs and variations, five of which are shown on the following pages.

The Loewy prototypes have the merits of simplicity, flexibility and realism. The only fixed architectural feature is the pylon for dealer's sign and company insignia; even this pylon, painted the bright red of Harvester products, is simple in both design and construction. The space requirements of the dealer's operation, especially of the service shop, led to the adoption of a 16 ft. bay, with expansion limited to one direction.

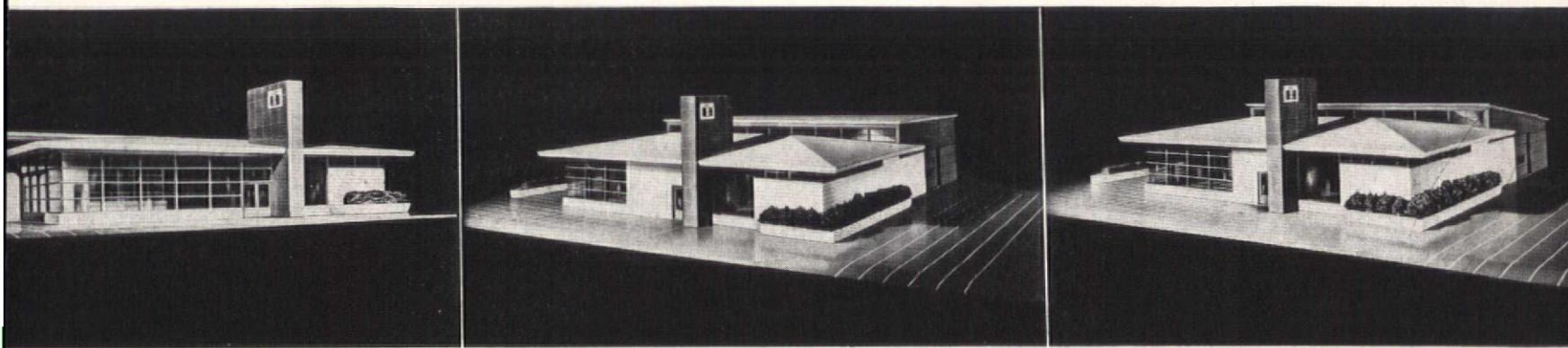
\* The volume of International Harvester's business is enormous—\$364,526,600 in 1942—and the variety of its products fantastic: an ordinary plow alone has about 110 different plow bottoms. Its original line of harvesting and haying machines has broadened to include hundreds of agricultural items, motor trucks, power equipment, etc.



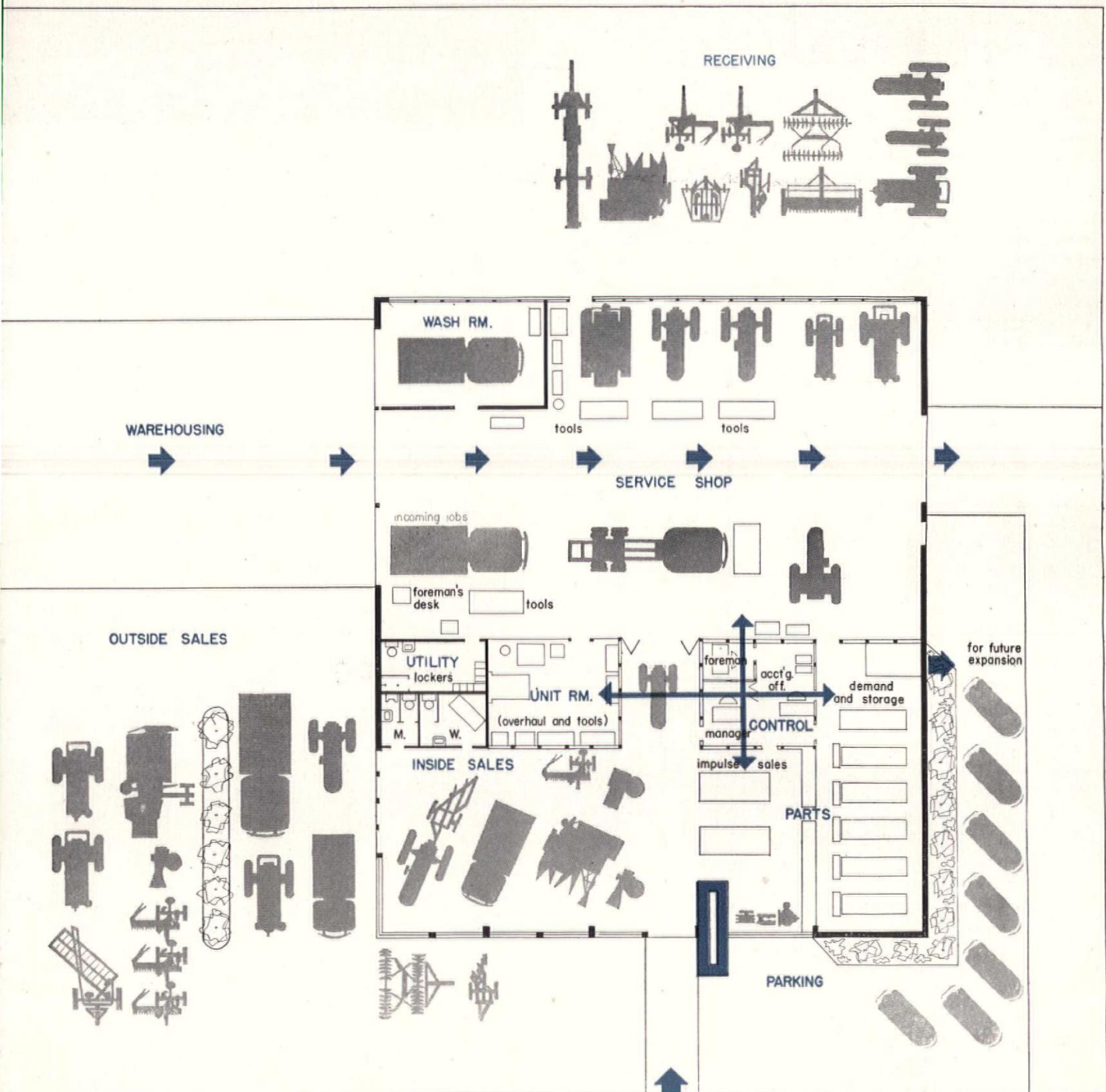
EXTERIORS OF 4 BASIC TYPES VARY ONLY IN

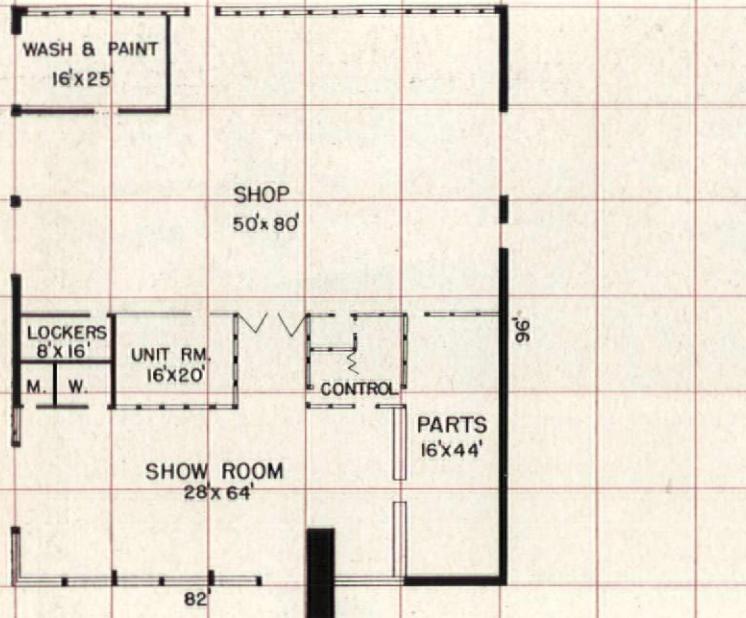


**AREA ANALYSIS:** Although four basic types and five variations were evolved, they are all identical in basic organization. All details of space allocation, floor plan and ground use have been developed on the tested operating principle of a fully departmentalized dealership. This led to the basic areas shown above. These are in turn expressed architecturally in the plan (facing page) which includes development of the lot—parking, outside sales, future expansion, etc.



OFF-WHITE WALLS AND TRIM, LIGHT GREY OVERHANG AND BRIGHT RED PYLON. THIS RED IS REPEATED IN SALES ROOM CEILING.

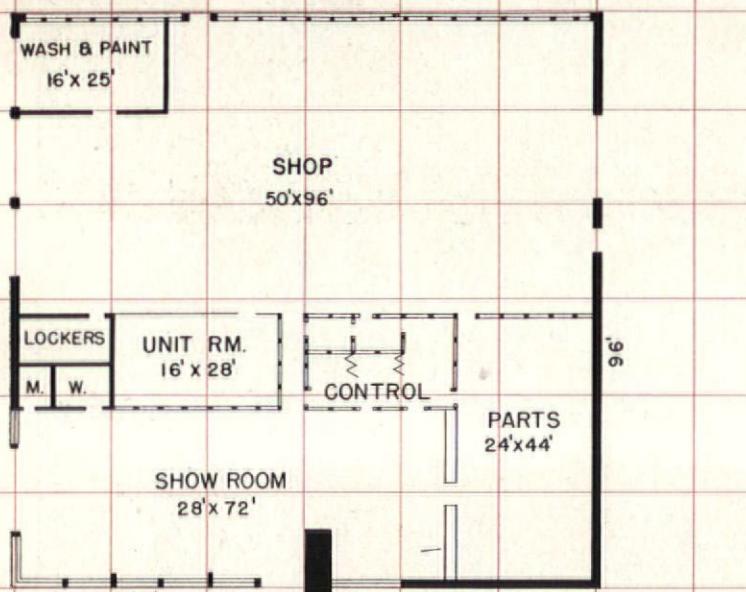




STANDARD PLAN NO. 1

Total floor area: 7,520 sq. ft.

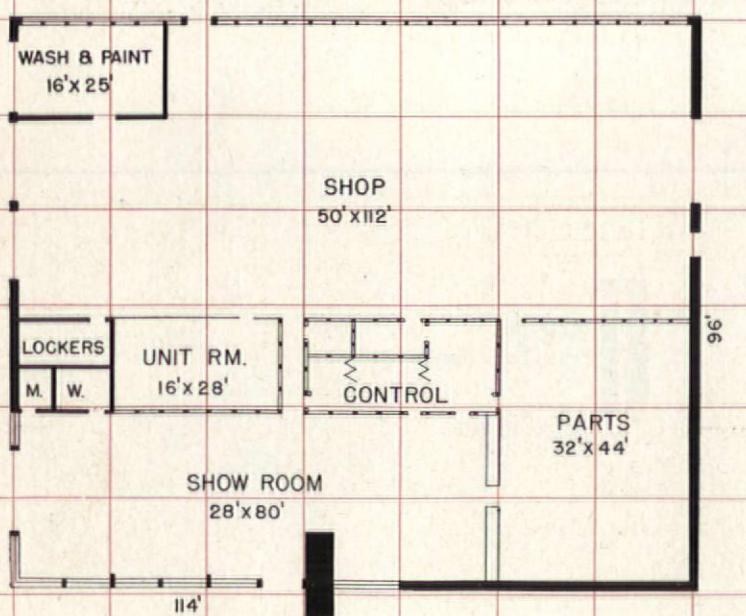
For annual retail sales up to \$125,000



STANDARD PLAN NO. 2

Total floor area: 9,024 sq. ft.

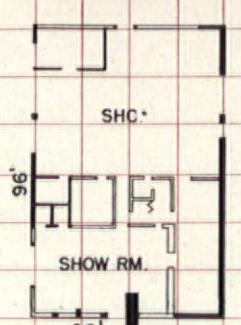
For annual retail sales up to \$225,000



STANDARD PLAN NO. 3

Total floor area: 10,528 sq. ft.

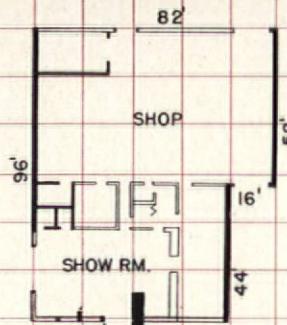
For annual retail sales up to \$250,000 to \$300,000



STANDARD PLAN NO. 4

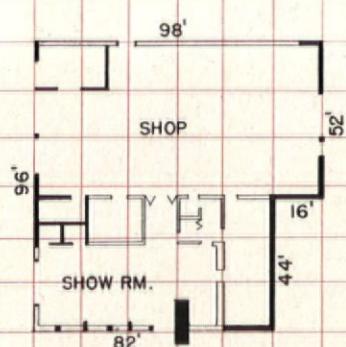
Total floor area: 6,016 sq. ft.

For gross retail sales up to \$75,000



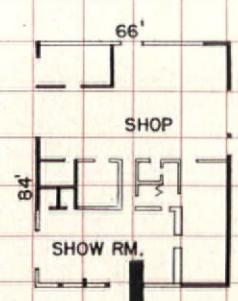
VARIATION A

Total floor area: 6,752 sq. ft.



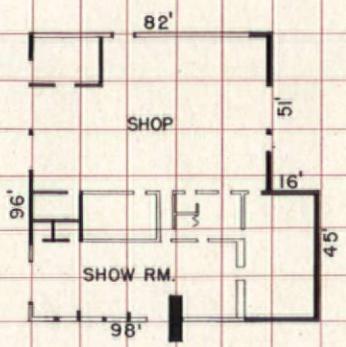
VARIATION B

Total floor area: 8,320 sq. ft.



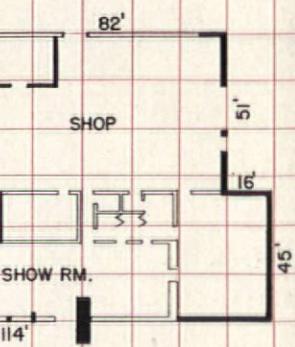
VARIATION C

Total floor area: 5,248 sq. ft.



VARIATION D

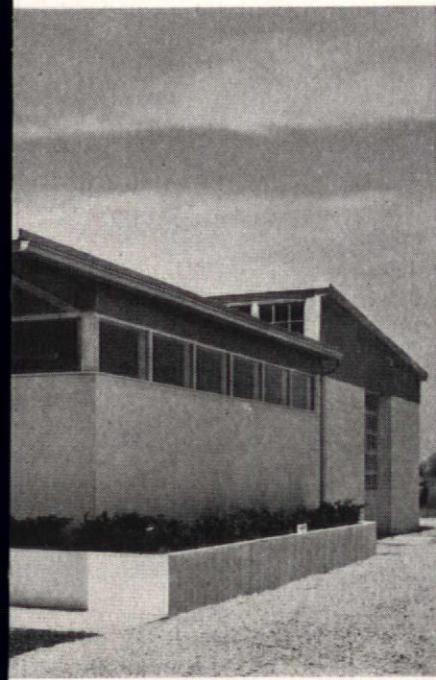
Total floor area: 8,224 sq. ft.



VARIATION E

Total floor area: 8,928 sq. ft.

0 16 32 48 FT.

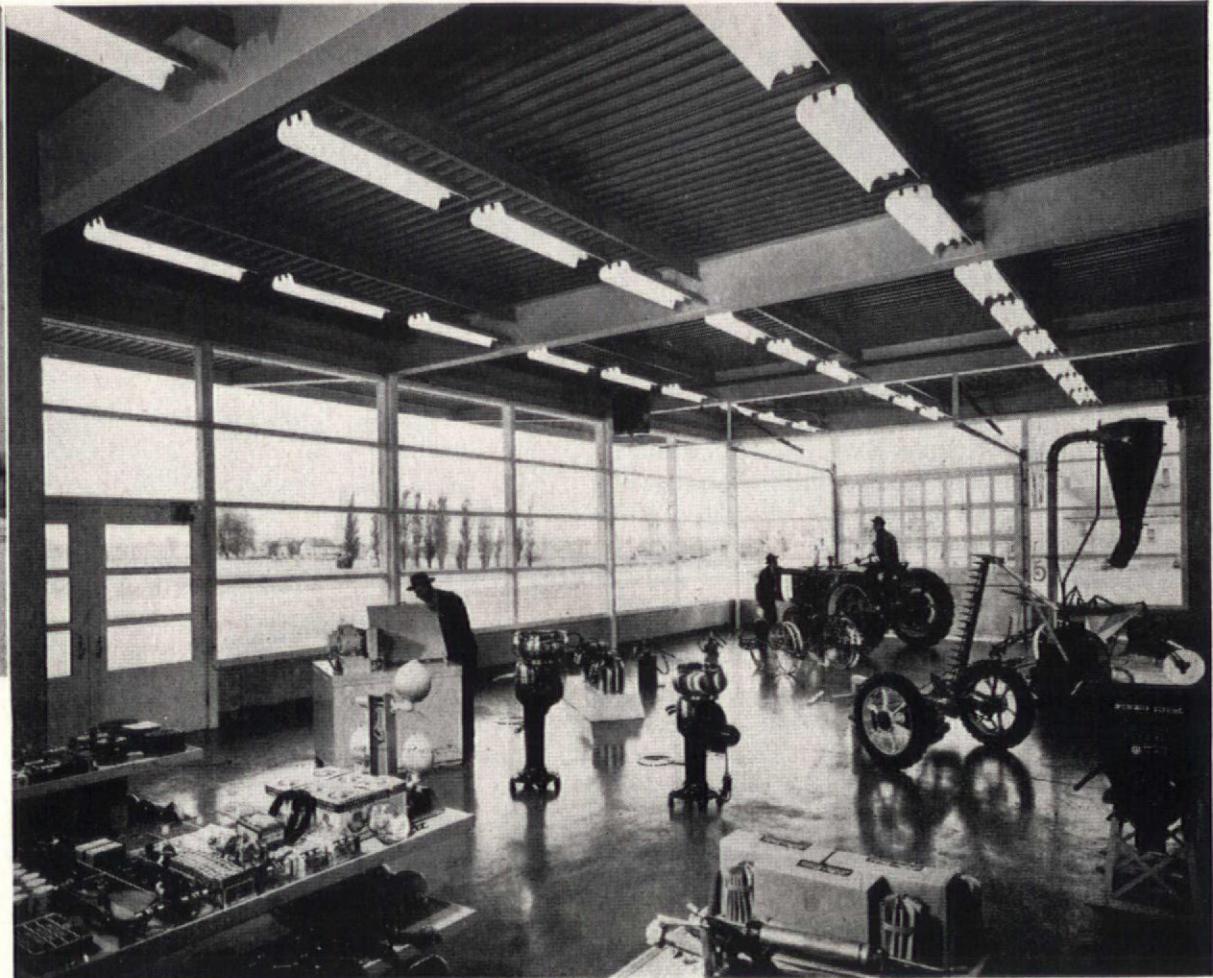


Raymond Loewy Associates, Designers  
Lyle DeWitt, Architect  
A. L. Simmons Co., General Contractors

First actual building based upon the new Harvester prototypes is this new plant for Chas. C. Strohl at Lincoln, Ill. Mr. Strohl finds that his dealership "functions at a greater efficiency . . . already netting more profits" due to the closer management made possible by its plan.

#### CONSTRUCTION OUTLINE

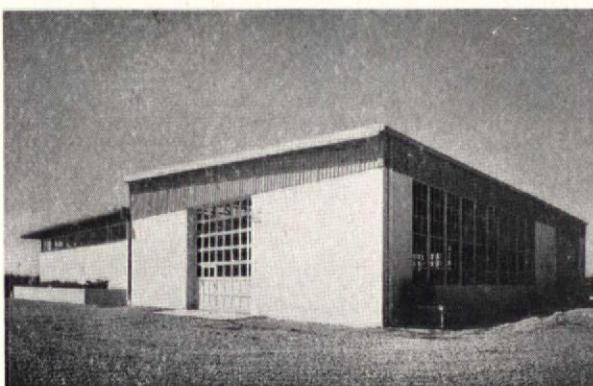
**STRUCTURE:** Exterior walls—cement block, inside same with wood glazed partitions. Floors—reinforced concrete. **ROOF**—"Q" panel steel, H. H. Robertson Co. **SHEET METAL WORK**—galvanized iron. **WINDOWS:** Sash—Ceco Steel Products Co. Glass—single strength, quality A and plate. **GARAGE DOORS**—Overhead Door Corp. **HARDWARE:** Sargent & Co. **PAINTS**—U. S. Gypsum Co. and Truscon Laboratories. **ELECTRICAL FIXTURES:** Fluorescent—Mitchell Mfg. Co.; incandescent—Graybar Electric Co., Inc. **PLUMBING FIXTURES:** Kohler Co. Water pipes—galvanized iron; remainder—cast iron. **HEATING:** Unit heaters and valves—C. A. Dunham Co. Boiler—Kewanee Boiler Corp.



SALES ROOM OFFERS SIMPLE, BRIGHT, EASILY CLEANED BACKGROUND FOR LARGE PRODUCT DISPLAY



SALE AND STORAGE OF PARTS AND ACCESSORIES IS NEATLY HOUSED IN ONE END OF SALESROOM



16 FT. HEADROOM NECESSARY FOR LARGE EQUIPMENT YIELDS CLERESTORY LIGHTING IN SHOP

#### STANDARD PLANS AND VARIATIONS

Since dealerships are most readily classified by annual sales volume into four broad groups, the standard plans follow the same classification.

# TENNESSEE LIBRARY COUNCIL

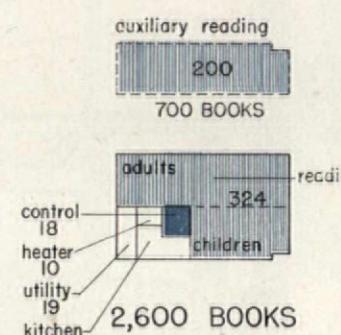
in conjunction with TVA specialists, develops a coordinated group of small libraries. Mario Bianculli, architect; Mary U. Rothrock, consultant; Helen M. Harris, chairman

The Tennessee Valley had outgrown Mr. Carnegie's prototypes, in concept as well as scale: this was already clear in 1940, when the Chattanooga Public Library moved out of its 1905 Carnegie building into newer and larger quarters. And it was confirmed by the Tennessee Library Council at its first meeting, in May 1944. Even a preliminary survey, the council said, revealed that the libraries of the southeastern states "have been greatly limited in their capacity to make a significant contribution because of marked deficiencies in personnel, resources and facilities." There was, the Council felt, an immediate need for not less than 1,000 new libraries in the region. Moreover it was important that in their design these new buildings should reflect the changed conditions of the times and the region. For the concept of the library's function has been greatly broadened in the last half century —broadened to include the whole community, adult as well as child, ordinary reader as well as student, culture as well as facts. And, in this region especially, there was need for a totally new type of service to small, isolated rural communities.

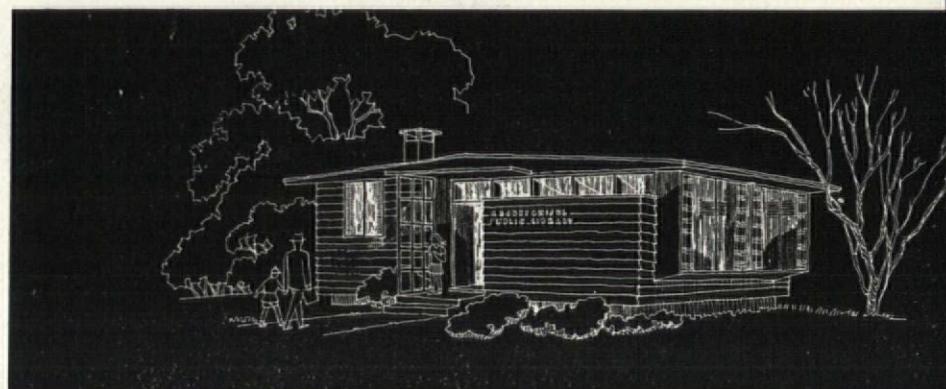
The Council set to work to develop a set of prototype designs for such a program, in collaboration with the architectural and library specialists of the Tennessee Valley Authority. The designs on the following pages are the result. It was recognized at the outset that the actual building would have a decisive effect on the service the community received. As Miss Mary U. Rothrock, TVA library specialist, put it: "A library building may be thought of merely as a place in which to keep books; or it may be designed with such understanding and imagination that its mere physical form and presence stimulate and promote the kind of library program needed by the people." That this approach has been followed is apparent in all the prototypes evolved, regardless of size. They are simple, attractive and flexible. By all sorts of devices of plan and equipment, they aim to extend the usefulness of the building to the whole community. A sink and electric plate make refreshments for small meetings possible. Folding benches and a portable screen provide movies for 28 people in even the smallest model. The interiors are well-lighted, gay and informal with a minimum suggestion of institutionalism.

Together, the five basic types constitute an architectural pattern for a whole library system. Covering all contingencies except the largest cities, which already have fairly adequate facilities, the program includes five basic prototypes, ranging from a small branch one-room library (two of whose three variations can be prefabricated by the TVA method) to a county or regional headquarters library building with a full-scale meeting room. The smaller buildings in the series, though possessing all essential facilities, are designed as branches or affiliates of the system rather than as wholly individual units. Under this administrative arrangement, the headquarters building houses the central book collection for the region and staff facilities for technical processing. The buildings in the smaller communities can be correspondingly reduced in book shelving capacity and work space.

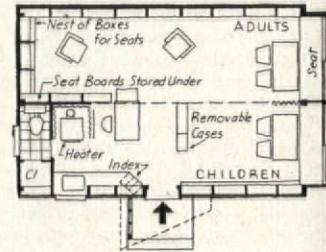
AREAS GIVEN IN SQUARE FEET



DIAGRAMMATIC SPACE ANALYSIS SHOWS AREAS REQUIRED FOR 2,600 BOOKS

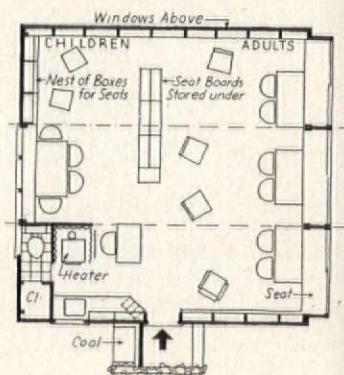


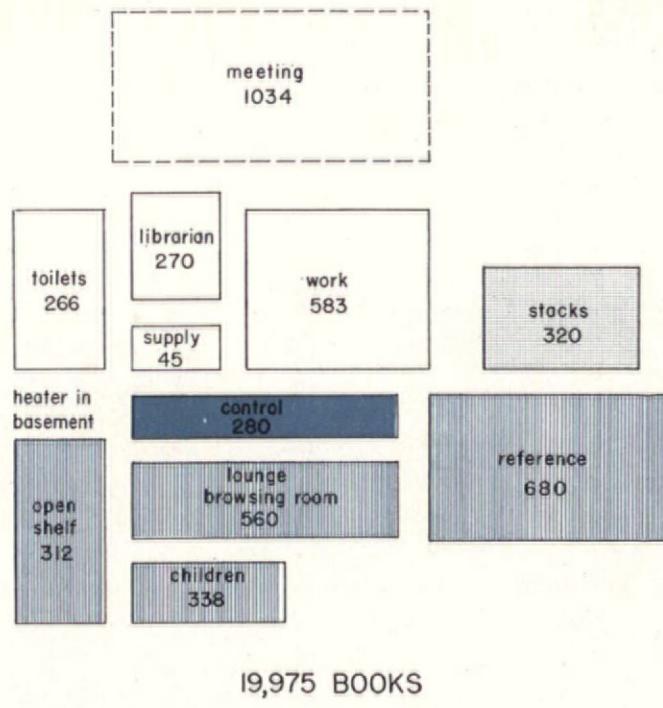
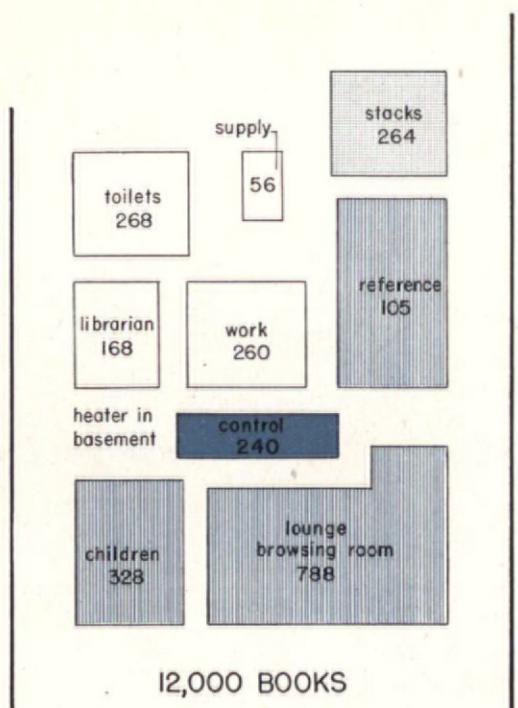
**TYPE 1A** is a small, (2,600 book) one-room branch library for rural use. It consists of two prefabricated sections which can be trucked to the site completely equipped, and requires only a simple foundation and utilities connections to be ready for use.



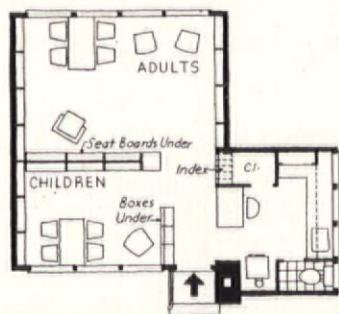
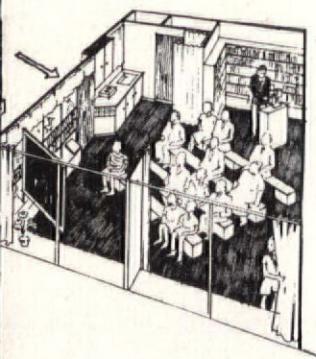
SCALE: 1/16" = 1' 0"

**TYPE 1B** is a slightly larger (3,300 book) version made from three prefabricated sections, two of which are identical with those used in 1A. Buildings of this type can be readily enlarged or shifted to new sites as community needs develop.

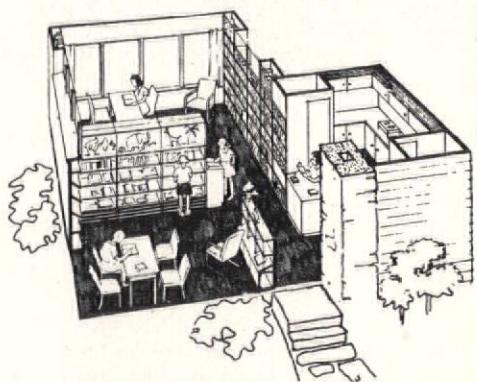
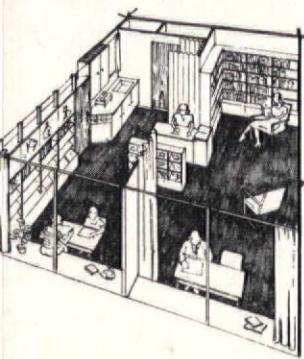
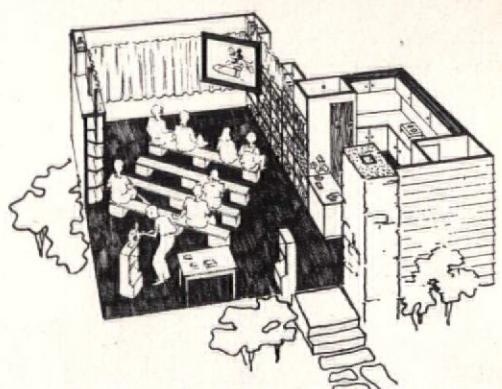


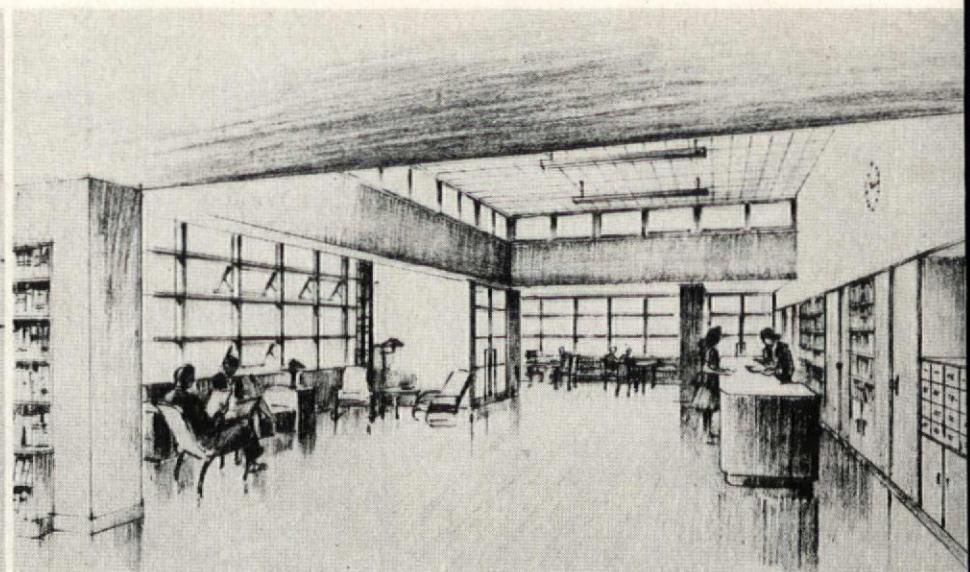
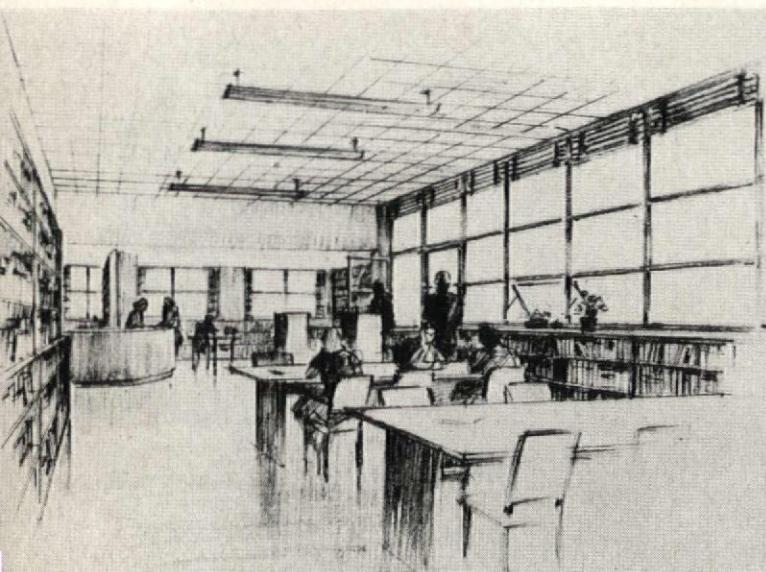


ENT PURPOSES IN LIBRARIES OF VARIOUS SIZES. SIMILAR FUNCTIONS ARE DENOTED BY SIMILAR COLOR TONES

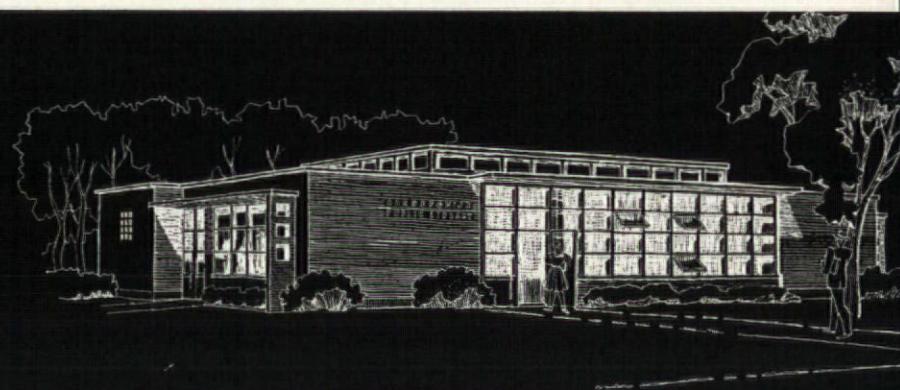
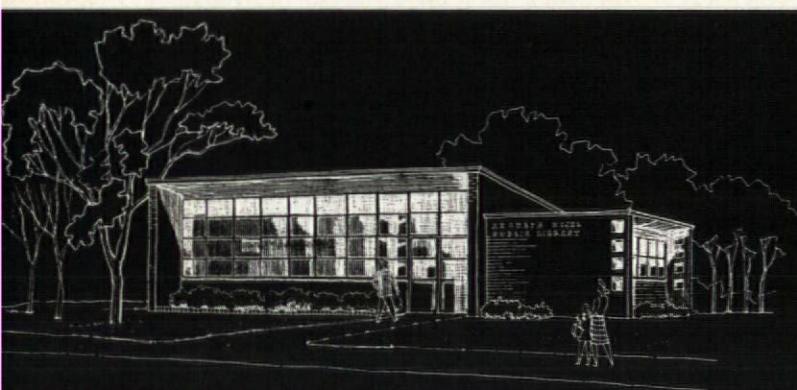


**TYPE IC** is a conventionally-built branch library consisting of three rooms, and accommodating 3,000 books. Interior sketches show conversion of unit for motion pictures and meetings. Sectional shelving forming partition can be taken down in a few minutes.

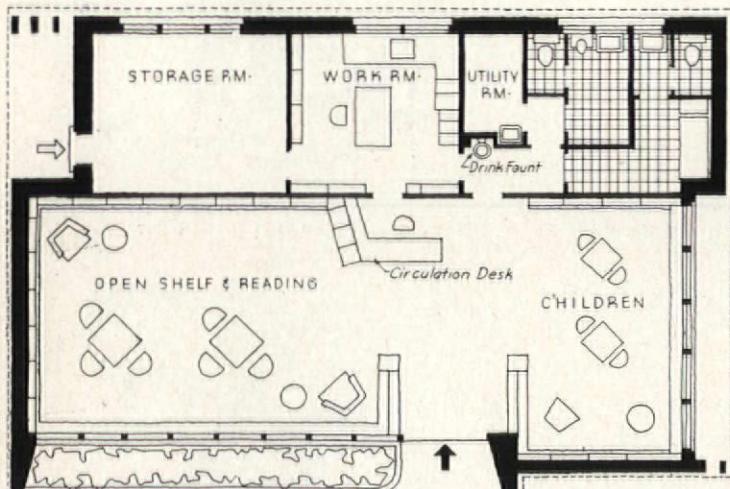




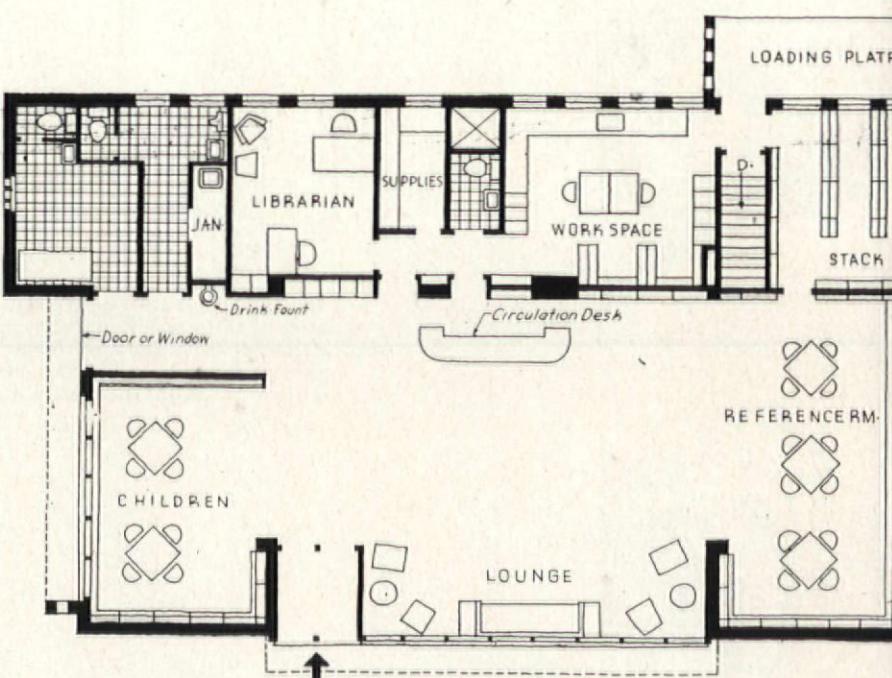
TYPES 2 AND 3 HAVE OPEN, ATTRACTIVE LOBBIES WHICH SERVE AS COMBINATION CHILDREN'S ROOMS, READING AND REFERENCE ROOMS



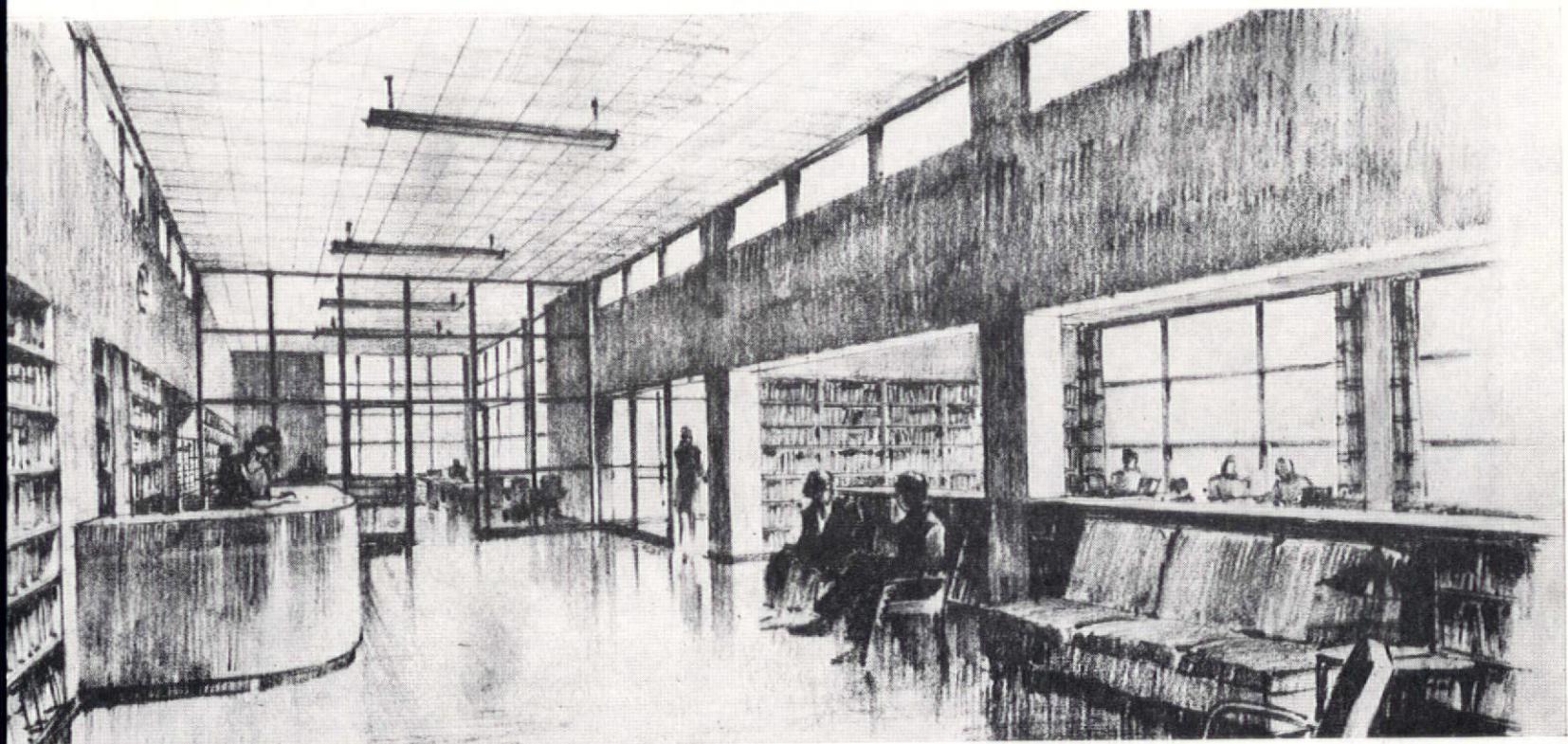
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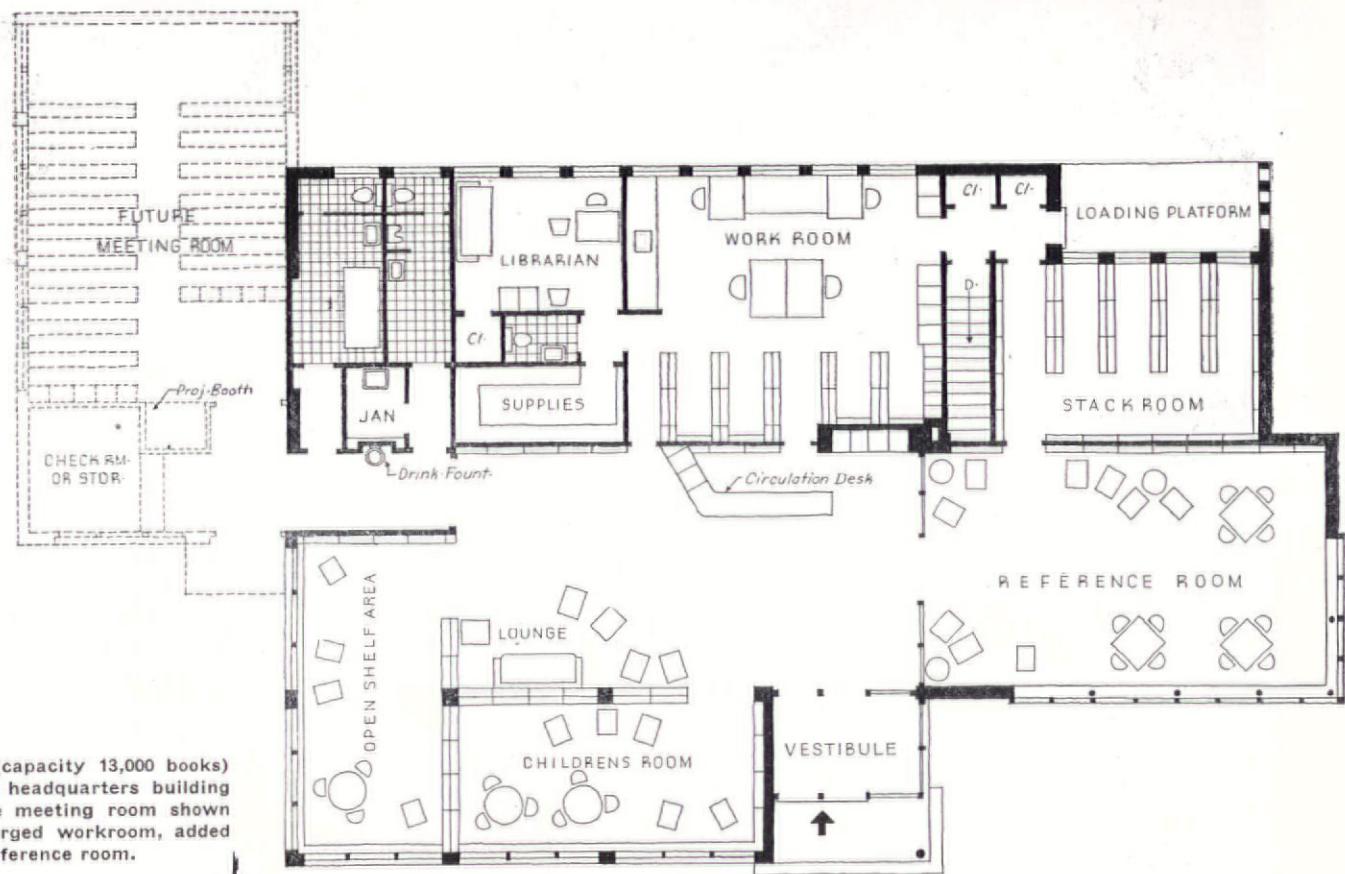
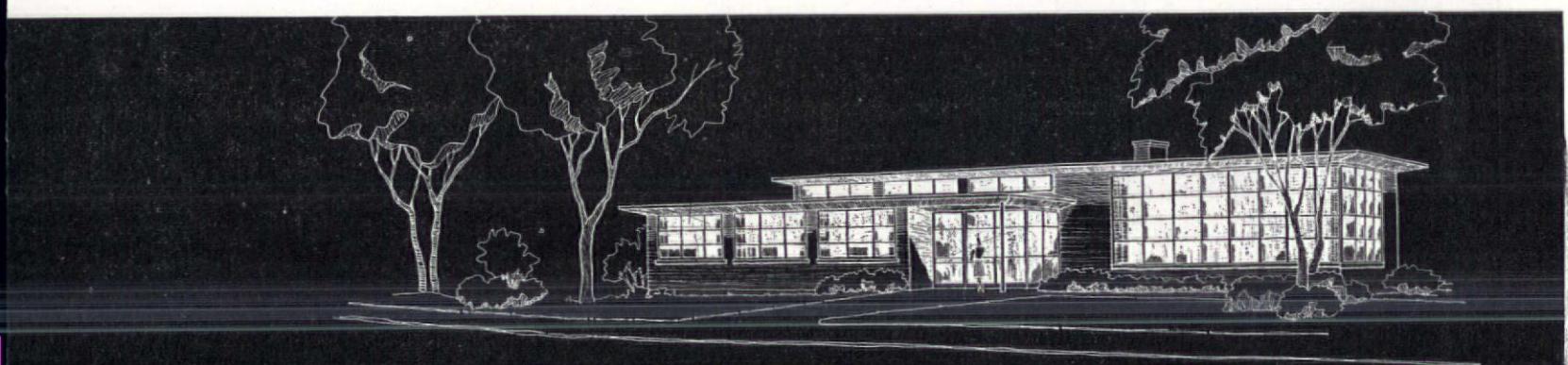
**TYPE 2** is a medium-sized branch library with a capacity of 5,000 books. Straightforward plan divides building into clean-cut working and public sections, leaves the latter as open as possible to facilitate changes in the activities program.



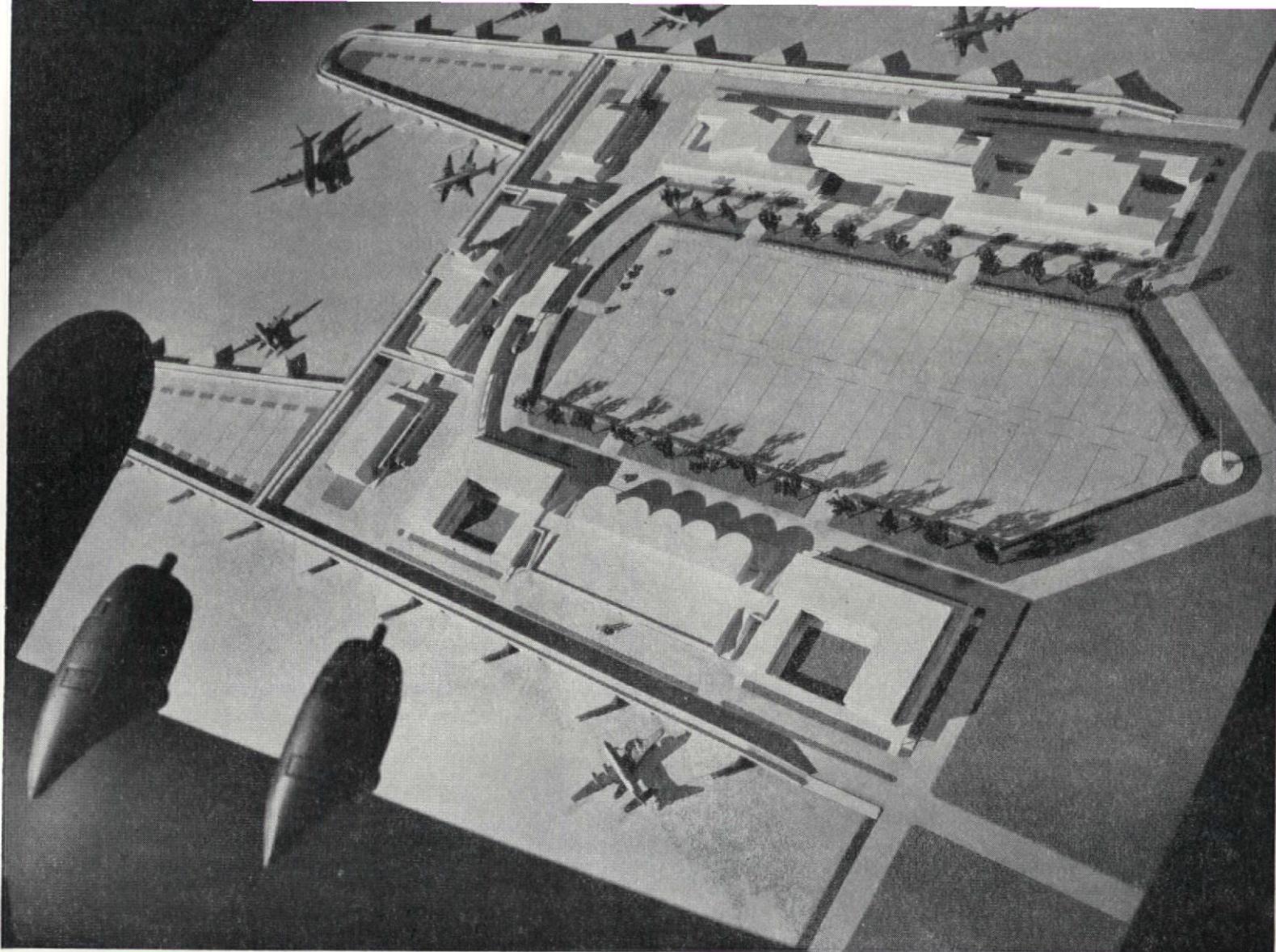
**TYPE 3** is a small county headquarters building to accommodate 10,000 books. Public space is divided into several functional areas, but these open into one another for maximum flexibility in use. Clerestory windows light desk and central portion.



IN HEADQUARTERS DESIGN DOUBLES AS LOUNGE. CHILDREN'S ROOM OPENS OFF SPACE AT RIGHT. NOTE BILATERAL CLERESTORY LIGHTING

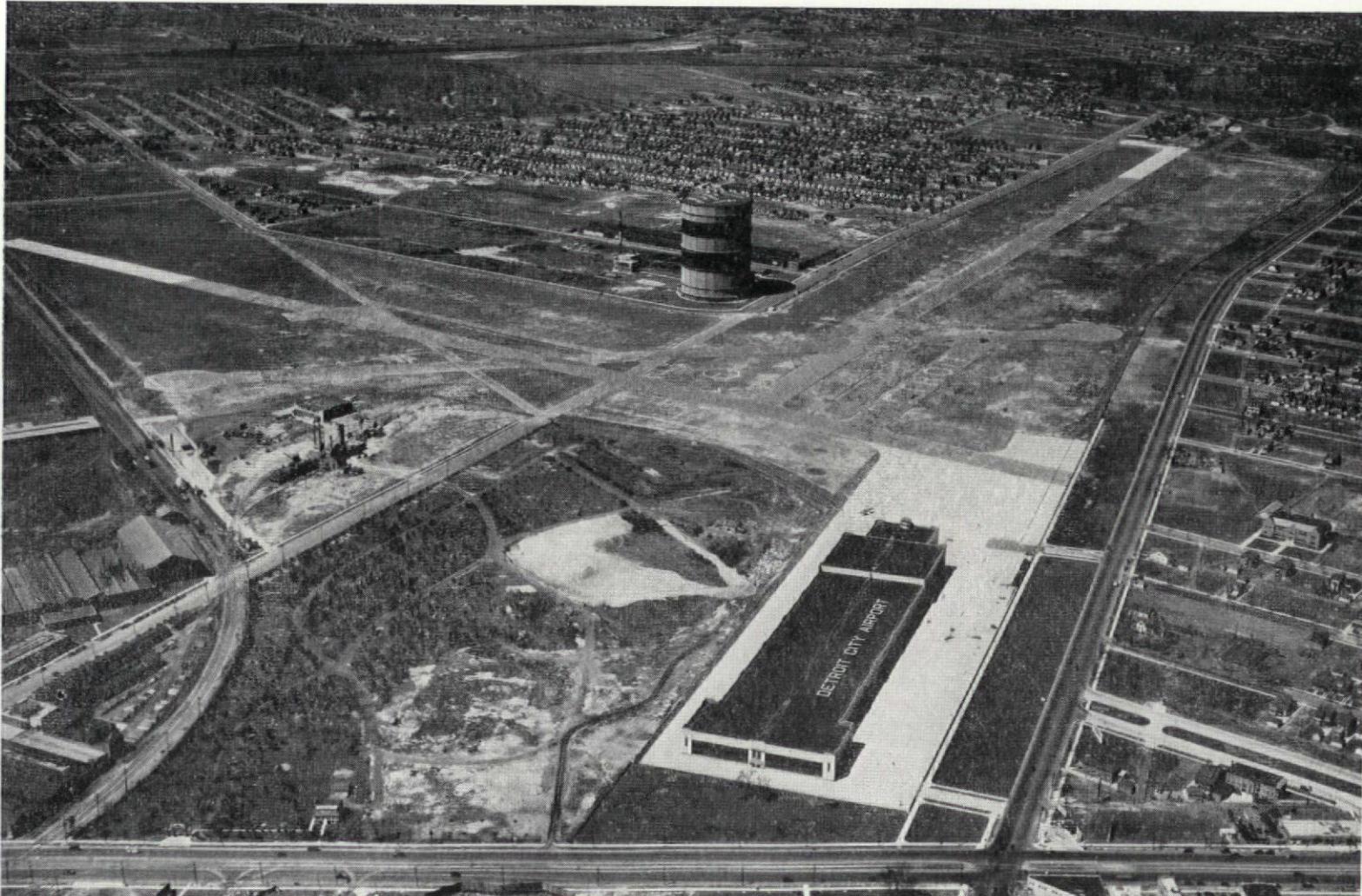


**TYPE 4** is a county library (capacity 13,000 books) which functions as a regional headquarters building with the addition of the large meeting room shown dotted in the plan. Note enlarged workroom, added open shelf area and separate reference room.



TOMORROW'S AIR TERMINAL MUST BE PLANNED NOW IF ALL THE BENEFITS OF MASS AIR TRANSPORTATION ARE TO BE REALIZED

DETROIT'S HAZARDOUS, CONFUSED AND UGLY AIRPORT IS TYPICAL OF INADEQUATE AIR TERMINALS THROUGHOUT AMERICA TODAY



# What's wrong with our AIR TERMINALS?

An authoritative national survey reveals that most of our airports are inefficient, inadequate, poorly planned and badly located. Some planning principles which meet immediate needs and provide for future expansion.

A lot of Americans are about ready to accept the Union Pacific's advice: "Relax! Next time take the train." The pre-war romantic haze that softened the harder edges of commercial flying—in some ways making it a tangible example of the great new world of science, "shortening space and expanding time"—has worn pretty thin. The planes still fly magnificently and the airlines still try to love each passenger, but the thrill is gone. The average air traveler today thinks not of the now-accepted freedom of the blue skies, but of the series of unscheduled waits every plane journey entails: buying a ticket, transportation to the airport, keeping up with luggage, checking in, waiting to take off. He thinks, too, of the disagreeable standing in line, of crowded taxis and confusing buildings, of dashes through rain or snow to and from the plane, of no place to sit. And he remembers the ugliness of it all: cramped downtown offices, rides through city slums to equally hideous airports, overlapping buildings in every style, dirty interiors badly lighted, badly ventilated and badly designed.

The trouble is: our air terminal facilities are hopelessly inadequate.

The need for improvement is urgent enough at present, but impending events in the world of flight make drastic action imperative. After a world war won chiefly by aviation, people everywhere are anxious to use the plane for peace. In America thousands of veterans flew with the Air Forces or were flown by the ATC. These men and their families and friends demand such transportation efficiency in daily life. The airlines have recognized this great public airmindedness, and vast fleets of planes—some to span the world, most to establish new local routes—soon will be delivered. Estimates say 5,000 commercial planes must have terminal facilities by 1955, whereas only 350 planes had to be handled in 1941. More planes mean reduced fares; air travel will cease to be a luxury; air terminals must be designed for new crowds as well as new equipment. If the hopes of manufacturers are realized, the skies of the next decade will be dotted with some 350,000 private planes, whose owners must seek harbor at the expanded municipal air terminals or at a vast number of new private facilities. The federal government plans to aid both commercial and private flying by two bills now in Congress. The Senate bill authorizes 100 million annually for five years for aid to the States in developing a nation-wide system of airports, while the House bill grants a sum of 650 million over a ten year period. Certainly air terminal construction will rank with highway and conservation programs as a major postwar government project.

The two groups who have most to do with the solution of the air terminal problem now and in the future are the airlines, who use the airports,

**MARC THOMPSON.** In 1944 the Civil Aeronautics Administration, realizing the growing need for informed advice on airport buildings, hired Marc Thompson to make a country-wide inspection of extant terminal facilities, to consult airlines executives, airport managers, architects and engineers, and to write a booklet on the results.

Thompson was well qualified for the job. He had just completed three years as architect with the U. S. Navy, chiefly expanding and designing new air bases for the Marine Corps. Previously he had worked for Walter Dorwin Teague on both the New York and San Francisco expositions. After College on the Pacific Coast and travel in Europe, Mr. Thompson spent six years in New York for broad experience in the offices of Cass Gilbert and McKim, Meade and White.



Thompson

and the cities, who own the facilities. The airlines, well aware of the fact that time and money saved by planes may be canceled out by expense and delay to the passenger at air terminals, today are urging the cities to improve existing airports or establish new ones. The cities are anxious to cooperate, but realize that such vast expenditures of municipal funds must be made self-liquidating. When the design stage has been reached, the problem is compounded by the fact that there are literally no examples of really adequate terminal design anywhere in the world. Current suggestions by both airlines and cities often are short-sighted, stressing immediate revenue features that are injurious to all in the long view. There is pressing need for a logical set of *planning principles* which, when freely adapted to local conditions, will produce air terminals avoiding current pitfalls and more suited to the vast needs of the future.

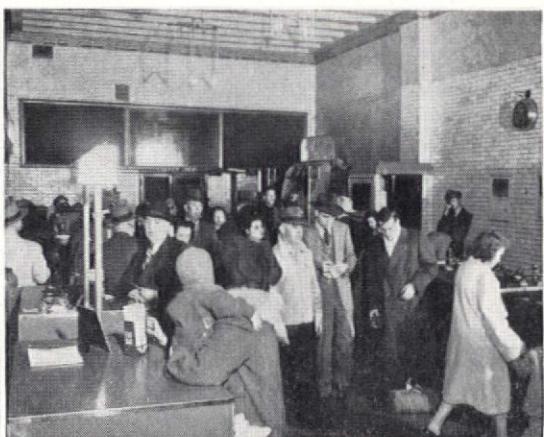
## SITE

Before any air terminal is planned, or even an airport site is considered, Mr. Thompson urges that the services of a competent architect be obtained. "In the past, airports have been too dominated by 'practical men,' who mistake the 'most inexpensive' for the 'most practical,'" says Mr. Thompson. "In consequence, much original construction has to be torn down and junked before permanent buildings can be erected, thus wasting the entire original expenditure. Complete planning costs little, but demolitions and alterations are expensive. Any sum spent in planning is well spent."

Nelson Morris



V. H. Henderson



Vories Fisher



**FORT** of uncovered loading of is universal, deemed unavoidable by experts.

**DELAY** caused by cramped terminal interiors is prolonging air travel, generating passenger dissatisfaction which will be hard to live down.

**DISGRACE** of slum districts constitute ugly backgrounds against which cities try to welcome their air visitors. Circle shows location of terminal building beyond hangars.

In many American cities vast sums have been spent on existing airports, and it is natural that such communities would think twice before abandoning this investment. But in most cases the cost of converting the present buildings into an adequate air terminal would be as much as new buildings. If such an airport is not well located for terminal purposes, it should not be converted. Rather, a proper site should be secured, and the present airport used for the increasing volume of private flying or air cargo.

## BUILDING AREA

In addition to proper location in relation to the city, the site for the terminal airport must contain sufficient building area. In many cases today, where an airport is incapable of handling increased traffic, it is admitted that the fault is in the inadequate buildings, not the runways. Not only are the buildings inadequate, but so is the entire building area. Original plans have flanked tight, complete-unit "terminal buildings" with huge all-purpose hangars, and given these structures little room between field and highway. With the growth of air transportation, there has been little or no room for expected airport activities to expand, much less the revenue producing concessions that more and more are becoming the financial backbone of air terminal operation. There is no space for the offices, sales rooms, shops, garages, hotel, restaurants and amusements that the isolated location and large number of employees of the typical terminal now demands. Thus an unsupervised mushroom growth is appearing across the public highway from many airports, depriving the airport management of needed revenue and detracting from the appearance of the airport itself.

"Beyond plenty of ground for buildings and their expansions, the air terminal site must allow room for parking and for free circulation of planes, vehicles and pedestrians. The importance of planned circulation cannot be overemphasized," says Mr. Thompson. "Not only the plan of the building but the location of the building is dependent on these factors. The question of the circulation of passengers and cargo is present from the time they enter the airport gate until they enter the airplane, and vice versa. The lines of circulation, therefore, extend not only through the buildings but from the building to the public highway, and to the plane."

## AIRPORT PLAN

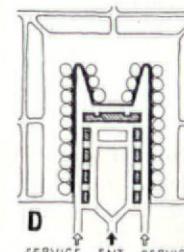
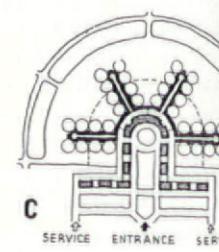
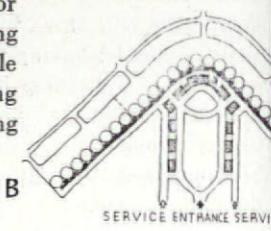
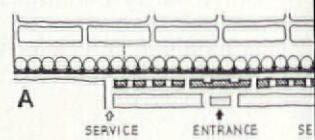
"After a site of proper location and sufficient size has been chosen, a plan should be made of the entire airport as it will be at its maximum eventual development, no matter how little is to be built immediately. The airport land is divided

into Landing Area and Building Area. Landing Area includes the runways for landing and take-off of planes, and the taxiways by which they are brought to the apron. The architect must understand the circulation of planes on the ground and the eventual development plans for the Landing Area in order to lay out the Building area properly. The Building Area includes all airport land not concerned with the traffic of planes themselves."

"The trouble in the past has been that all buildings have been placed together in one area," comments Mr. Thompson. "Hangars have been placed near the administration building, allowing no room for it to expand. Little consideration has been given to the berthing or parking of planes or parking of cars in relation to buildings. And little study has been given to the number and kinds of buildings themselves, or their disposition. It is certain that every kind of building and parking area will need to expand. To make this possible it is necessary to decentralize buildings and areas according to their function, so that each can expand without interfering with the other."

## APRON

The apron is one of the most vital parts of the airport layout. Here passengers and cargo finally board or leave the plane, here thoughtful planning must do its best to relieve the confusion resulting from the meeting of so many functions. The apron should be planned to accommodate all the planes which may be berthed at one time. At larger terminals this may eventually mean as many as thirty berths. The principle determining the shape of the apron is that of placing the most distant plane berth within the shortest walking distance from the terminal building lobby. In plans having 30 berths of 160 ft. each, the total frontage will be almost a mile. Thus, schemes which wrap the apron about the terminal building as a center tend to reduce the distances that passengers and cargo must traverse from terminal building to plane. Circulation of planes to and from the taxiways must be considered, too, with sufficient area to maneuver freely. At a major airport, two-way circulation of planes on the apron should be provided.

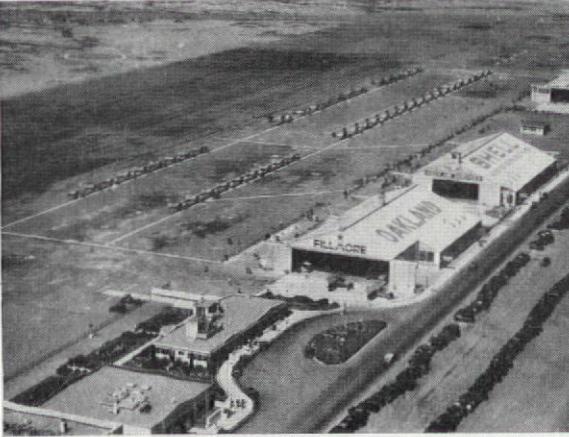
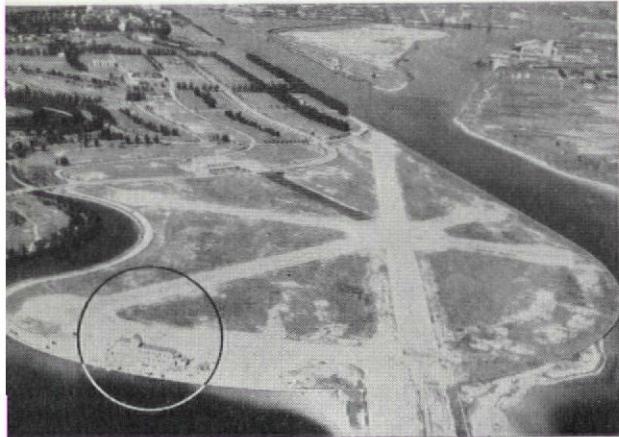


**APRON DIAGRAMS** (above) Long walking distances from terminal to planes when apron is straight (A) are reduced little by bending apron to right angle (B). Terminal is more efficiently placed near center of radiating apron spokes (C). Simpler apron pattern (D), shares the compactness of the spoke plan.

*Fairchild Aerial Surveys*

*Press Association, Inc.*

*Walter Sanders, Black Star*



**TAMPA'S** terminal building is located on far side of airport from city center. Auto traffic must circle field to reach building.

**OAKLAND'S** terminal cannot expand due to insufficient building area and crowding of adjacent hangars. Plan should provide for lateral additions to terminal.

**NEW YORK'S** apron, one of the longest in the country, already is so small that double plane berthing is needed to accommodate rush plane-load.

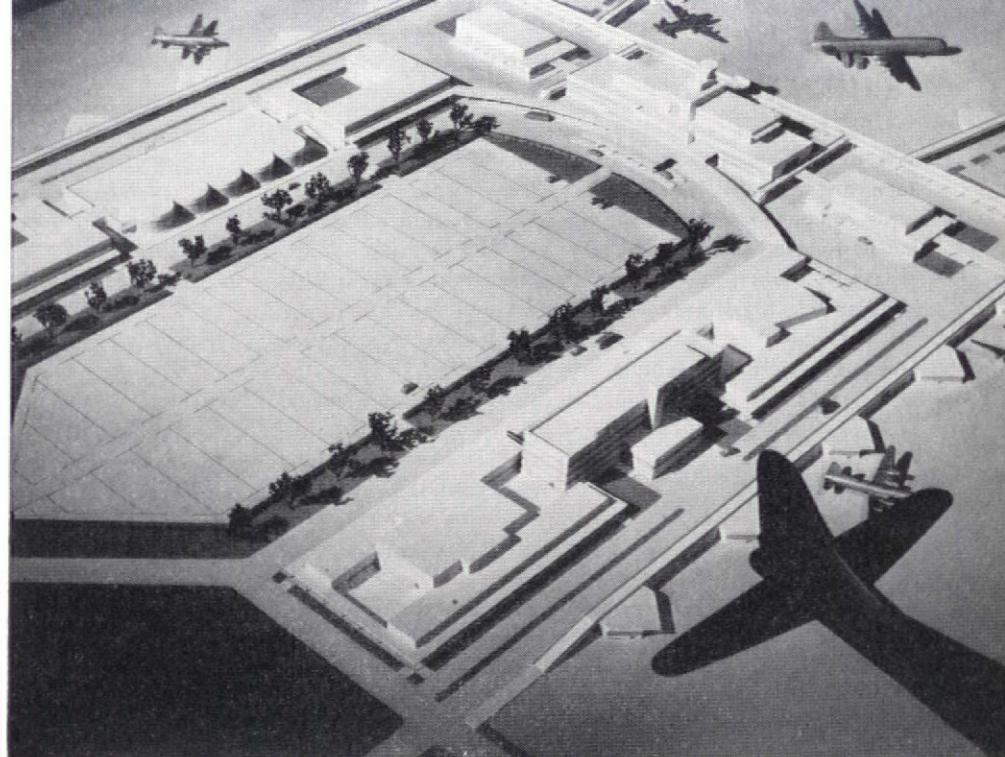
## ADMINISTRATIVE AREA

The Administrative Area includes not only the terminal building, or buildings, controlling the operation of the airport but any other structures which augment its service and revenue. To provide for expansion, these service and revenue buildings should be separated from the terminal buildings and grouped nearby in a comprehensive over-all plan, as suggested in the diagram and model at the right. Once planned, the various units can be built only when demand has become evident.

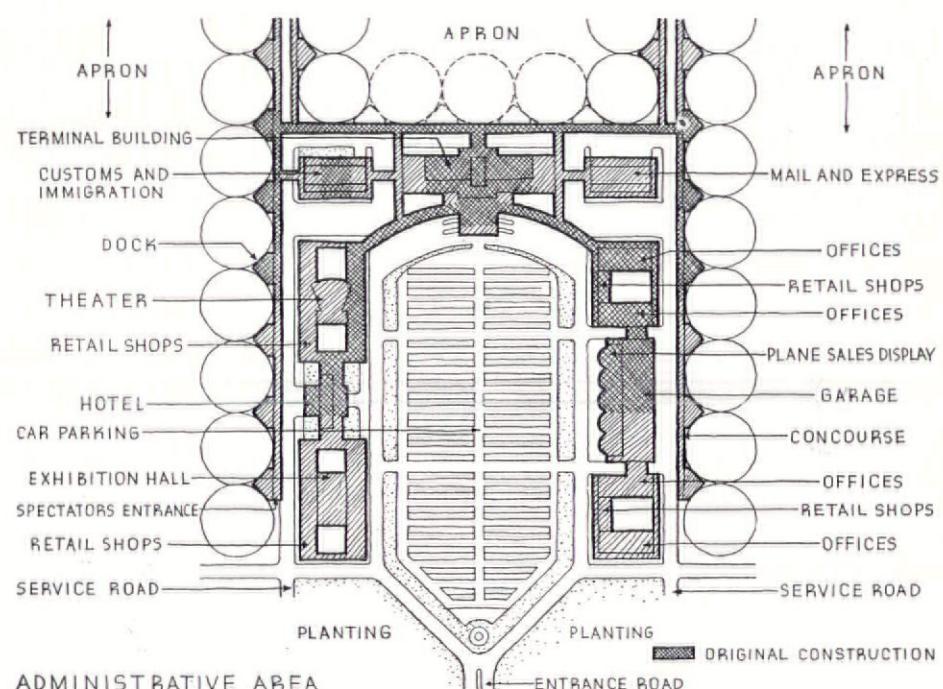
Office space at an airport is in ever-increasing demand, often with the stipulation that it be in the terminal building and overlook the field. Mr. Thompson says, "There are no offices except those for airlines operations and tickets which absolutely need to be placed in the terminal" and that offices facing the field offer too much distraction for workers. It has been common practice to design the terminal building as a 'monument,' squeezing offices into unused corners, or taking up spaces better reserved for passengers on the main floor, or for restaurants on the second. Ideally, offices for airlines, government agencies, aircraft industries, etc., should be housed in a separate building, or buildings, perhaps connected by a covered way to the terminal structure.

A hotel is a possible unit for the Administrative Area. The few hotels now functioning at air terminals have been filled to capacity since completion, serving the traveling public and housing permanent airport personnel. As private flying increases, a proper place to display and sell small planes might well be an "Airplane Row" in this area. A proven source of revenue is an automobile garage, offering storage, service and rentals to airline passengers. Spectators at airports now outnumber passengers six to one, contributing substantial revenue where pay turnstiles have been installed. Proper planning in the Administrative Area must give these aviation enthusiasts their beloved views of the unloading planes, yet keep them segregated from actual operations. As attendance at airports increases, such additional features as newsreel theaters, exhibition halls, swimming pools, retail shops, etc., perhaps will be added to the group of buildings. Car parking for airline passengers and personnel and for the visiting crowds must be provided in expandable areas, with access roadways designed for rapid circulation.

**IDEAL LAYOUT** (right) for Administrative Area illustrates various planning principles, resulting in an architectural grouping about the terminal building on the highway side of the field of all structures which increase the service and revenue of the air terminal.



MODEL GIVES THREE DIMENSIONS TO DIAGRAM OF ADMINISTRATIVE AREA BELOW



Floyd H. McCall



**SEATTLE'S** administrative area is an excellent example of the lack of air terminal planning—crowded, patched, inefficient, hopeless. Note mushroom growth of revenue-producing facilities around parking area at front of terminal building.



**DENVER'S** air passengers must fight their way to planes through uncontrolled spectator crowds, indicating the need for separating traffic by type. Best scheme puts spectators on separate level.

## TERMINAL GROUP

The key buildings in the Administrative Area are those which have to do with the actual handling of passengers and baggage, and mail and express. In a large airport four structures compose this Terminal Group: a Terminal Building for passenger ticketing, baggage handling, waiting, eating, etc.; a Concourse for sheltering passengers from terminal building to planes; a mail and express building for expediting this expanding function; and a customs and immigration building for terminals serving foreign travel.

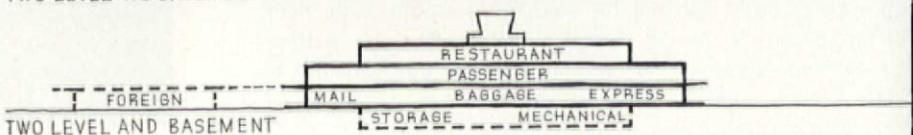
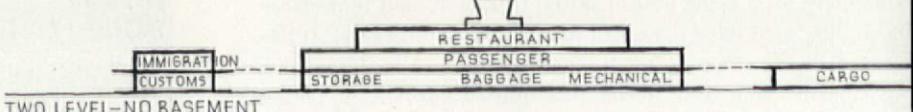
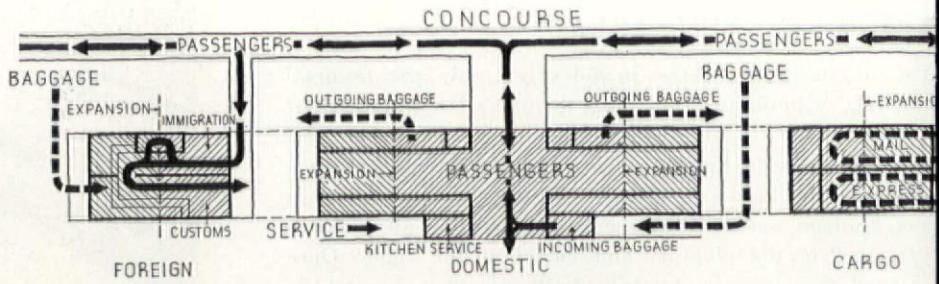
"The whole of the terminal group," says Thompson, "should be so flexible that any single function can be expanded independently. Three steps are recommended for accomplishing this: 1) divide the building into units according to function, 2) fix the dimension from front to back, so that expansion will occur laterally; 3) design the building, or buildings, for maximum probable development."

As air travel grows, the airlines realize that their properly-treasured "personalized service" may get lost in the crush. With this in mind, several companies have proposed "Unit Airline Terminals," where each airline erects a small terminal of its own connected with a public center and other airline terminals in a long, continuous building. Such a system, with its duplication of waiting, ticketing, baggage handling, and plane berthing facilities and personnel would cost the airlines—and the public eventually—much more than a "modified unit" terminal, where most activities are handled by an "airlines pool."

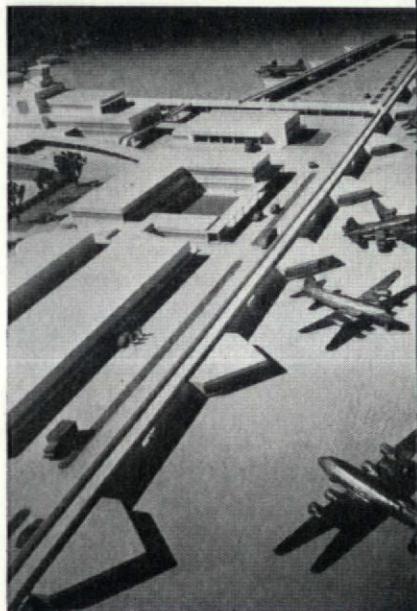
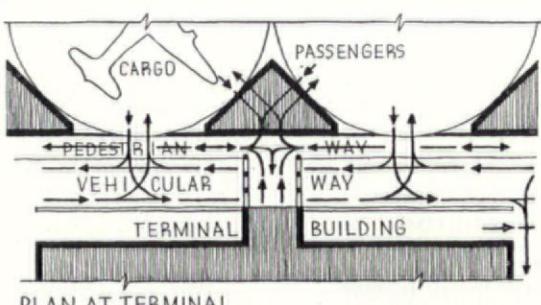
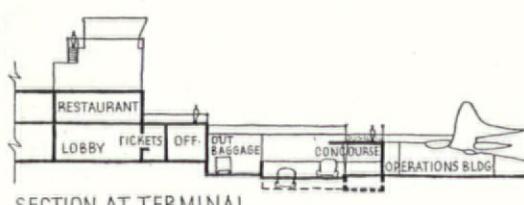
## CONCOURSE

The one feature on which all parties agree is that future air terminals must provide cover from terminal building to plane. Today's passengers have to dash long distances completely unprotected from the weather at many air terminals. At others, temporary pipe and canvas structures provide a slight shelter. A few terminals have permanent walled walkways usually constricted by expanding airline offices and the storage of loading equipment. But in no case is there yet any protection from the end of these shelters across the apron to the plane.

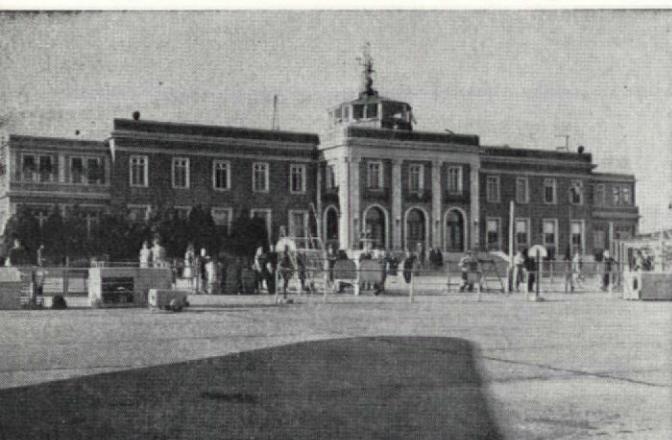
Until plane design and airline procedure are better standardized little more can be done to provide covered loading than to build a temporary, shed-like structure, usually called the "Concourse," to form the transition from the terminal building to the apron. This structure should consist of a weather-protected pedestrian way not less than 20 ft. wide, with possible provision for spectators on top and duct tunnel below, flanked on the terminal side by a vehicular way, and



CONCOURSE JOINS ADMINISTRATIVE



George Dorrill



ST. LOUIS has no concourse to protect passengers from terminal to plane. Note effect of open-air waiting room, clearly inadequate in bad weather.

The Kansas City Star



KANSAS CITY'S inadequate concourse is now misused for ticketing and waiting, destroying its value for baggage and passenger circulation.

Ben Schnall



TYPICAL CONFUSION of vehicles and pedestrians due to inadequate concourse, failure to allow service facilities in original plans.

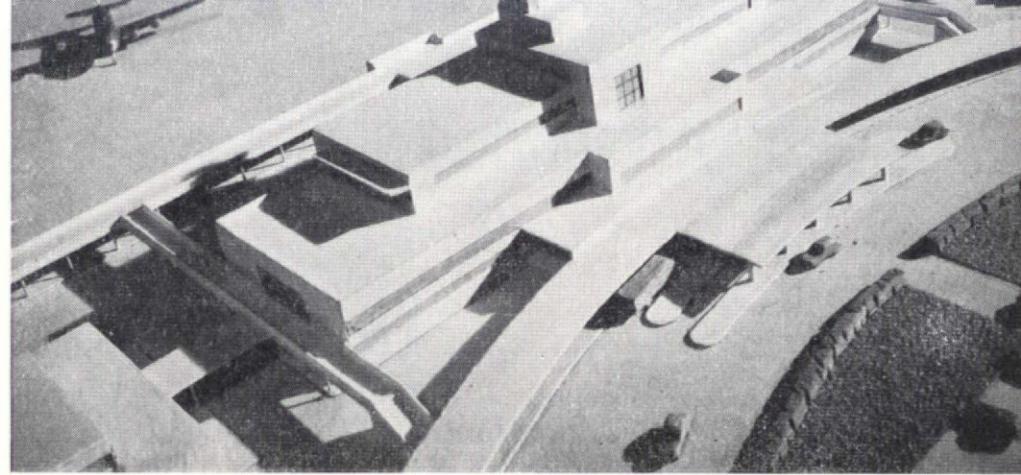
on the apron side by a series of units housing airlines operations offices, ground equipment and waiting space. The Concourse should be well separated from the terminal building to allow room for the vehicular way and to provide for future expansion.

## TERMINAL BUILDING

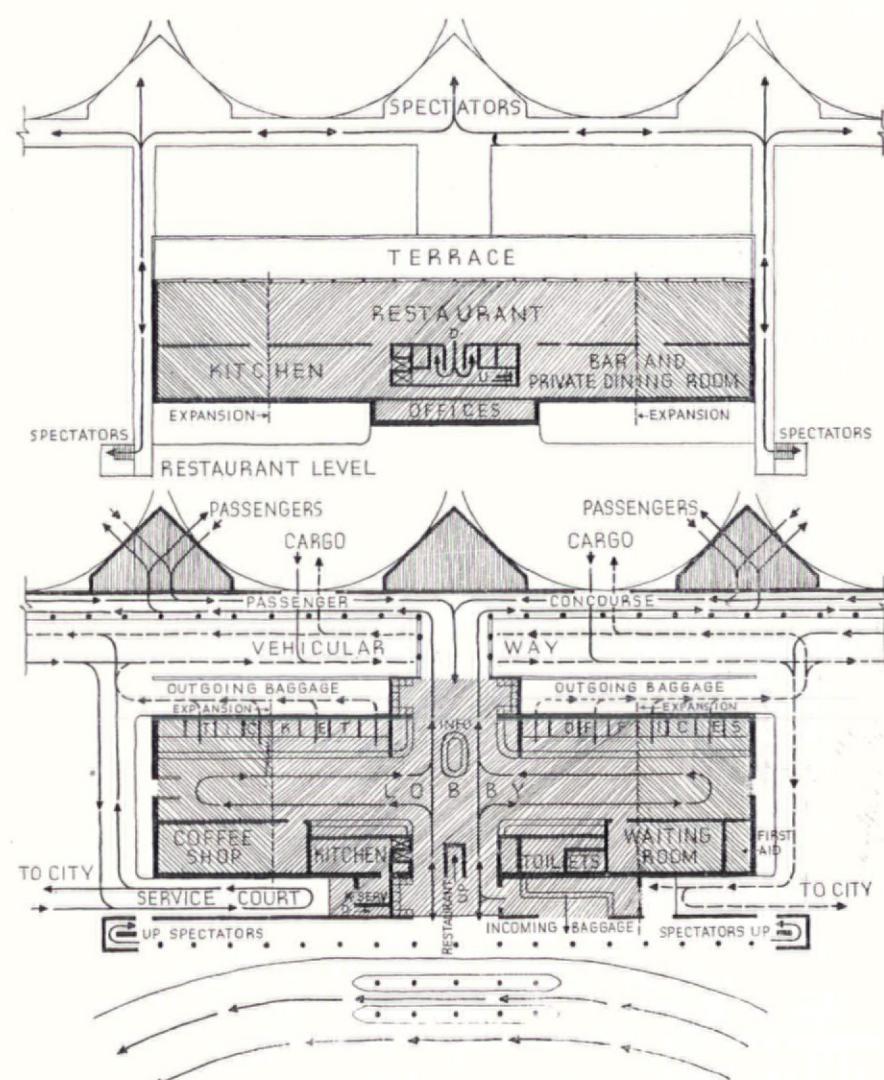
Thanks to the other units of the Terminal Group, the Terminal Building itself is concerned chiefly with the speedy handling of passengers and baggage from car to concourse and vice versa. This can best be done by careful, yet simple, planning of circulation. "The trouble with circulation both in existing buildings and plans for future buildings is due to over-complicated routing of passengers and baggage," Thompson points out. "Passengers are delayed by cumbersome airline outgoing procedures; and baggage is snarled by a series of excess incoming handlings, especially where vertical circulation must take place."

In instances where circulation has been conceived properly, many terminal buildings are now inadequate because their plans do not permit expansion. Emphasis must be laid on *flexibility*. Expansion for the Terminal Building can be accomplished as for the Terminal Group: division into functional units, and designing for ultimate growth *laterally*. The functional units of the terminal are those devoted to passengers (the lobby, ticket sales, waiting space and eating facilities), and to services (outgoing baggage, incoming baggage, and the building's needs). "The common practice of capping the ends of passenger facilities with baggage and cargo on one side, and kitchen and building services on the other," says Mr. Thompson, "has been responsible for more air terminals becoming outmoded than any other practice. Each unit must be able to expand laterally." To accomplish this, all costly services: stairs, elevators, toilets, kitchens, etc., should be placed in the center of the building. "It is easy to expand toilets into the waiting space, but the opposite procedure is difficult and expensive." Space for the exterior service courts required by this scheme is secured by building the Concourse and the driveway loading station as separate structures away from the Terminal Building.

Thompson illustrates his planning principles in the diagram at the right, a typical one-level terminal building suitable for a medium to large city. He calls attention, first, to the driveway and concourse entrances, as "the one element in the original construction which cannot expand." These entrances should have doors the full width of their generous opening, with no change in level except by easy ramps. The Concourse entrance may be controlled, only persons boarding or leaving planes being allowed to enter. The lobby ad-



TERMINAL MODEL SHOWS DIVIDED SPECTATOR AND VEHICLE CIRCULATION



Robert Anderson



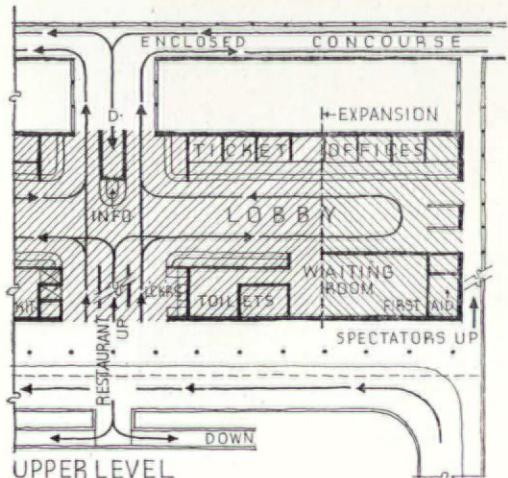
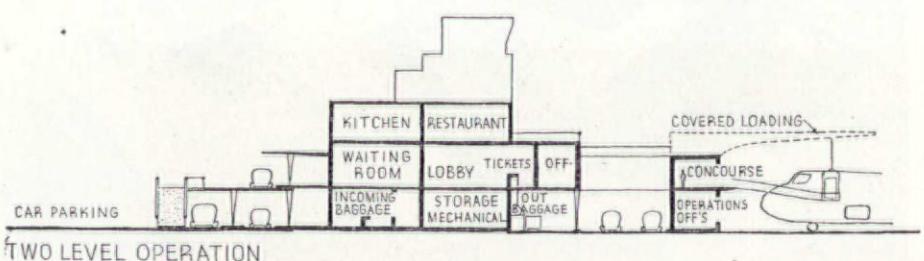
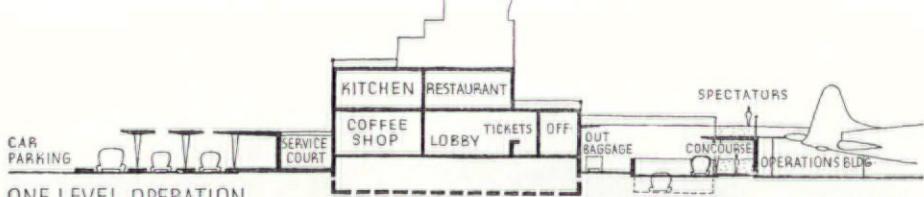
McCall  
Locked exit to planes is caused by Denver's badly faced ticket counter, which adjoins main doorway to plane loading apron, right.



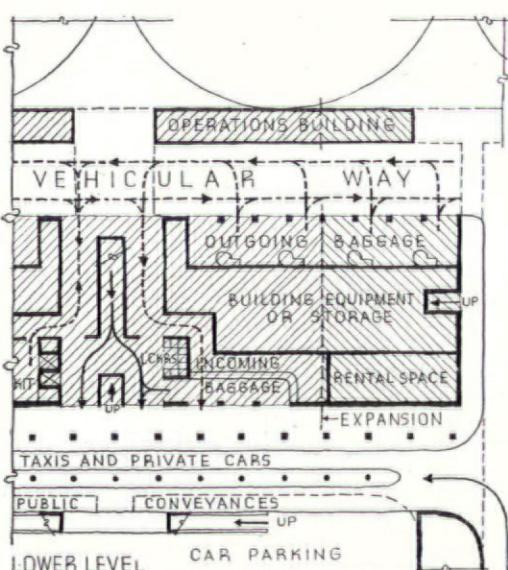
Vories Fisher  
DETROIT'S wastefully-high lobby is an ugly mess of overlapping commercial activities better housed elsewhere. Terminal should be used for passengers.



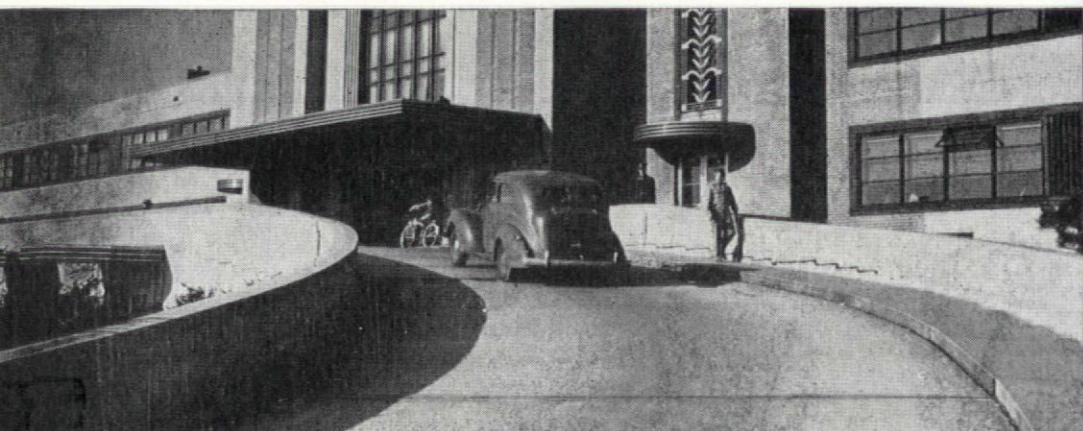
CHICAGO'S dingy restaurant makes no use of the always-interesting view of the field, no attempt to cater to airline's numerous upper-bracket travelers.



**UPPER LEVEL** plan is a duplication of the One-Level Terminal Building, minus baggage and building service facilities, plus elevated driveway running entire length of the facade.



**LOWER LEVEL** plan shows outgoing baggage arriving by way of chutes from ticket counters directly above, and city-bound passengers making use of a generous ramp to reach lower driveway entrance.



**STEEP RAMP** at LaGuardia Field, New York, slows operations at this two-level terminal due to insufficient covered unloading space. Narrow sidewalk is barely adequate for two pedestrians abreast, might better have been omitted altogether.

joining the entrance should be free of "seats, signs, and all things which tend to confuse the passenger," providing enough space for general circulation and for people awaiting incoming passengers. The tendency to create high, elaborately decorated lobbies is unnecessary, such money being better spent in more floor space and better equipment.

"There is some difference of opinion as to where to put the ticket selling facilities. In the past it has been the policy to put them either along the left and right walls of the Lobby—thus limiting expansion—or along the driveway wall, leaving the field wall to a view of the field. This practice encourages spectators to clog the field side of the lobby, and at many terminals, both large and small, it has greatly interfered with passengers in transit to planes." As Concourses are built, the view will be lost anyway, and both spectators and passengers will be better served if a separate entrance and viewing space are provided for rubbernecking. With the field wall thus cleared, the ticket selling facilities can be placed there, easily seen by passengers entering the building from the city, and adjacent to the vehicular way of the Concourse for the handling of outgoing baggage.

Concessions in the lobby are limited to those serving the immediate needs of the passengers—telephones, telegraph, newsstand, etc. Barber and beauty parlors, valet service, drugs, bank, post office, etc., are relegated to mezzanine or lower levels, or to buildings in the Administrative Area. Definite space must be provided and attractively furnished for waiting passengers, with adjoining toilet, restroom, and—in the larger terminals—first-aid and nursery facilities. A coffee shop, and perhaps a snack bar, should have separate spaces opening off the Lobby, and a handsome, well-run restaurant, dramatically viewing the field from the second floor of the Terminal Building, is suggested because of its revenue value to the airport. Further revenue is possible from a bar and private dining rooms, perhaps located on a third floor.

(Continued on page 130)

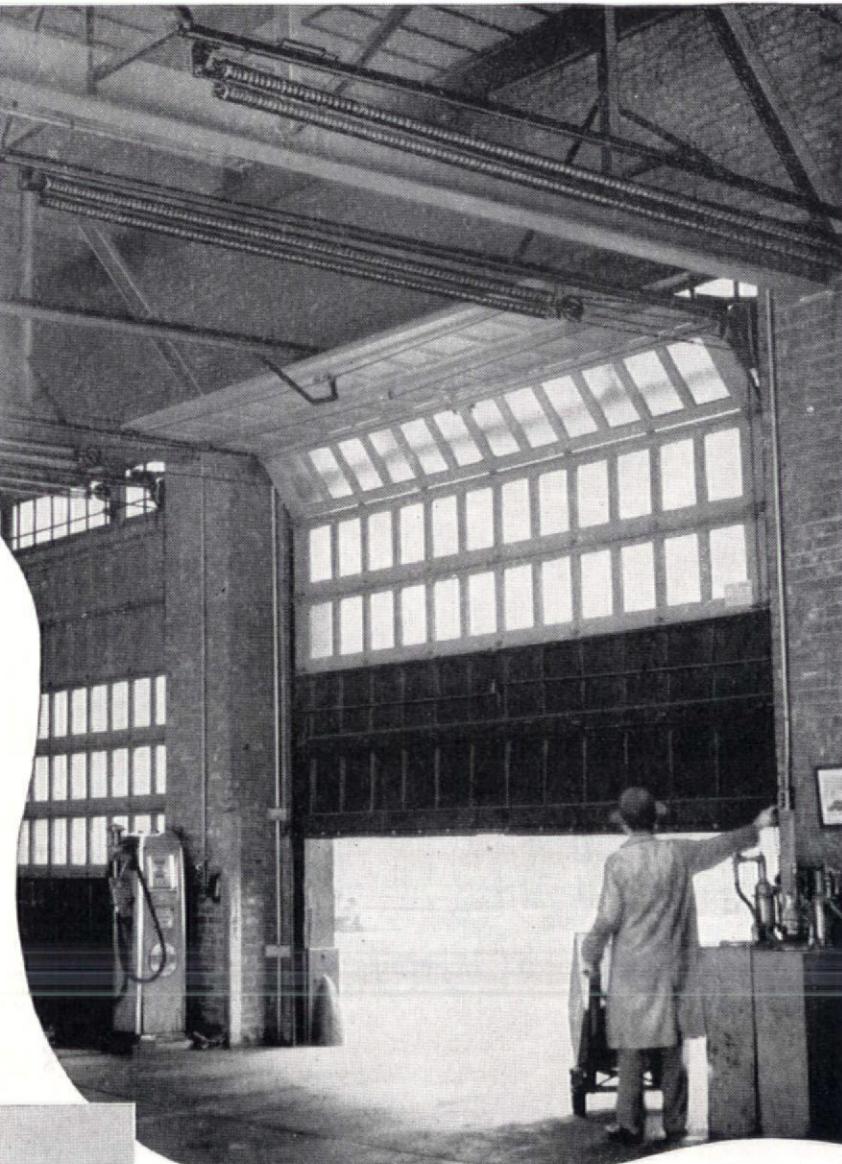


**NARROW STAIRS** seem to have been designed for a residence, not a busy terminal like LaGuardia. Picture shows unposed example of typical result during rush hours.

# IT'S A Rō-Way *all the way!*

If you were to visit our Galesburg Plant, you would see how these finer Rō-Way Overhead Type Doors grow like magic out of great piles of high grade lumber and stocks of selected steels. You would see here a modern plant equipped with special machines developed for the exclusive purpose of building Rō-Way Doors better at lower cost.

You would see woodworking machinery that accomplishes miracles in mill production.



You would see machines that roll and bend 2" and 3" track as easily as you bend a finger, and one of the most interesting sights you would see is those exclusive Rō-Way Spring Makers . . . the machines on which every Rō-Way Spring is produced so perfectly that it is Power-Metered to give just the right lift to the particular weight of each Rō-Way Door.

Just remember that Rō-Way Overhead Type Doors are *not* assembled from various sources. They get all of their exclusive features right here in our plant where everything from hinges and brackets to the finished door is "Rō-Way all the way."

We are now producing Rō-Way Overhead Type Doors for Industrial, Commercial, Residential, Agricultural and Government uses.

## ALL OVER AMERICA

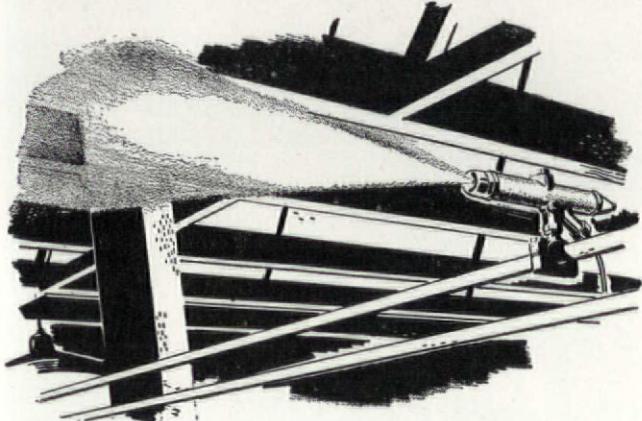
—you will find dependable sales and installation service available on Rō-Way Overhead Type Doors.

Write for Rō-Way's "Time-Saving Specification Book" for Architects. Please attach professional card or letterhead. See our Catalog in Sweet's.

**ROWE MANUFACTURING CO.** 996 Holton Street  
Galesburg, Ill., U.S.A.

**"There's a Rō-Way for every Door way!"**

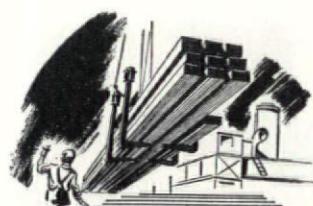
## Mist FOR GOOD AND EVIL



Mist, sprayed in process plants requiring high humidity, is vital to the quality of many products. But, it raises havoc with the wood structures. And steam and chemical-laden vapors in wet process plants cause ordinary lumber to go to pieces in a hurry.

Wolmanized Lumber\*, wood that's impregnated with Wolman Salts\* preservative, is highly resistant to the decay that inevitably develops in these humid atmospheres. Fibre-fixation prevents its washing out or leaching, assures added years of service life.

### The Advantages of Building with Wood



Building with wood means ease and speed of erection, light weight, resilience, high insulating value, paintability, low first cost and . . . when Wolmanized . . . long life.

**AMERICAN LUMBER  
&  
TREATING COMPANY**

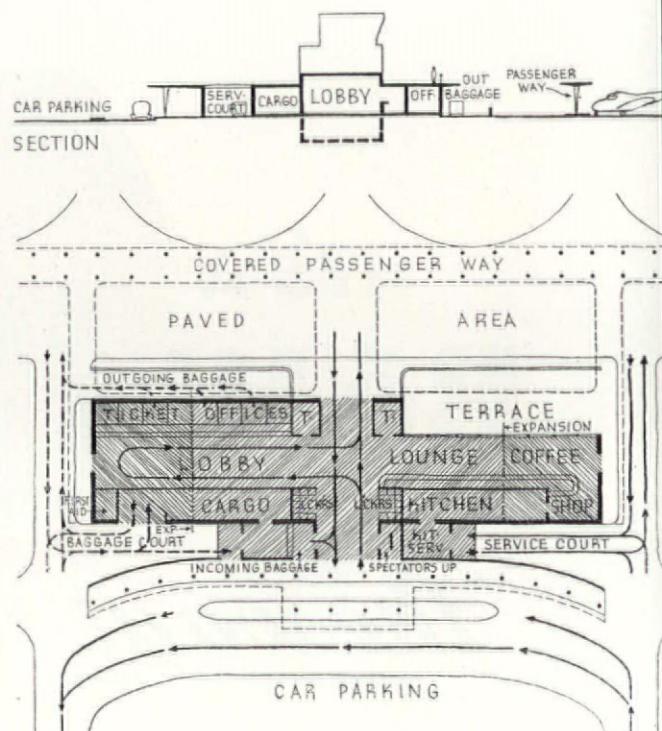
\*Registered trademarks

WOLMANIZING

FLAMEPROOFING

CREOSOTING

1647 McCORMICK BUILDING, CHICAGO 4, ILLINOIS



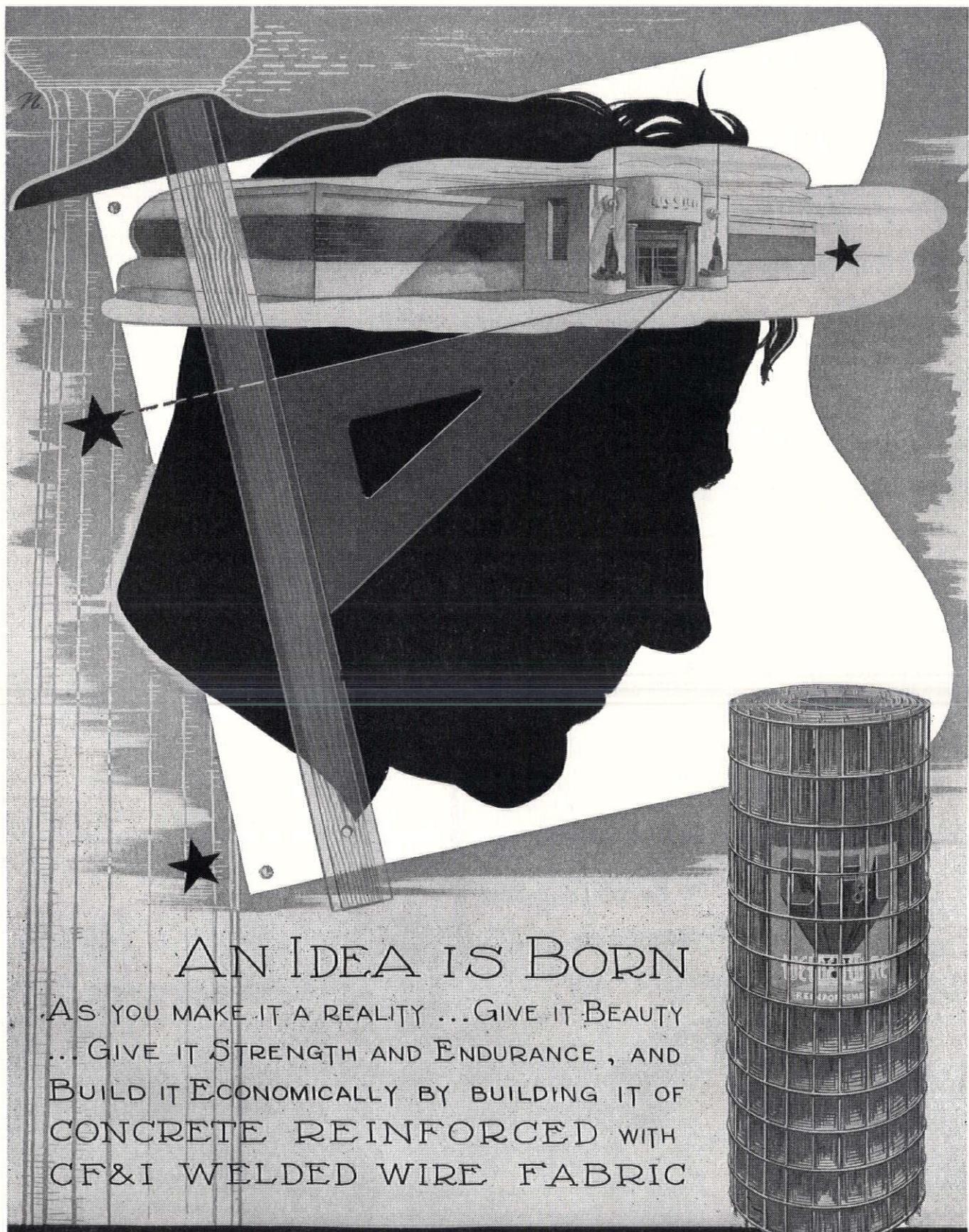
### SMALL TERMINAL BUILDING

For terminal buildings in small communities, Thompson suggests the planning principles diagrammed above, which are but a variation on his one-level scheme. In his opinion, "The plan could probably be symmetrical, but the most satisfactory distribution of space is usually accomplished by an unsymmetrical arrangement." At the smallest terminals cargo and baggage handling may be combined and placed adjacent to the ticket office for supervision. Ticket facilities should approximate those of larger terminals in unit size, and the offices may be placed on a second floor, since this space will probably not be required for a restaurant. Though the covered passage from building to plane berths may not be constructed at first, it should be planned from the start. Coffee shop and concession counter may be combined for economy operation. Toilet facilities should be proportionately larger at larger terminals, due to their use by groups of passengers from through planes. Spectators had best be limited to the dining terrace or to a special stair leading to the building roof.

(Continued on page 132)

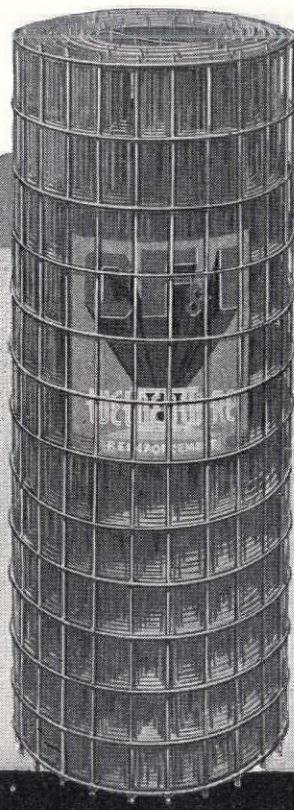


CHARLOTTE'S symmetrical little terminal is made even more pompous by its monumental stairway, an especially inconvenient feature in bad weather.



## AN IDEA IS BORN

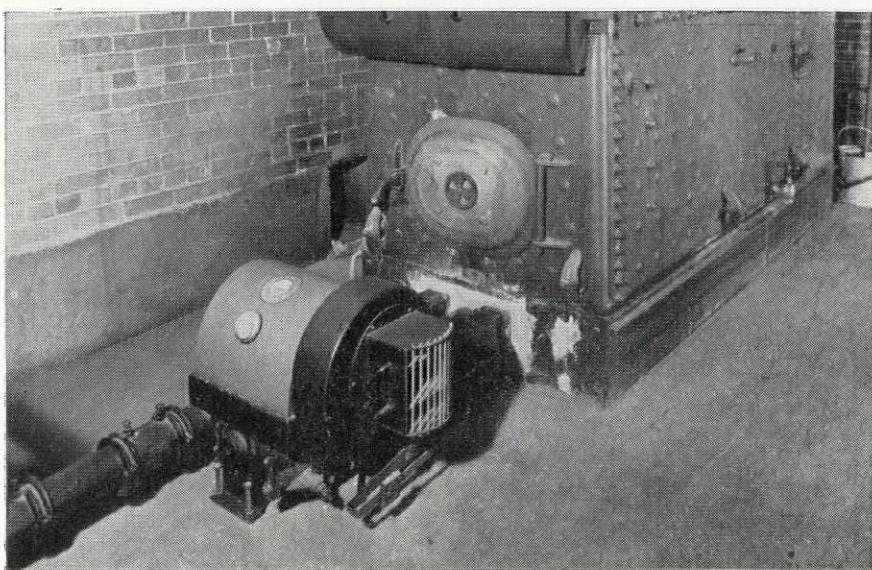
AS YOU MAKE IT A REALITY ... GIVE IT BEAUTY  
... GIVE IT STRENGTH AND ENDURANCE, AND  
BUILD IT ECONOMICALLY BY BUILDING IT OF  
CONCRETE REINFORCED WITH  
CF&I WELDED WIRE FABRIC



***The Colorado Fuel and Iron Corporation***

GENERAL OFFICES: DENVER, COLORADO

STEEL WORKS: PUEBLO, COLORADO



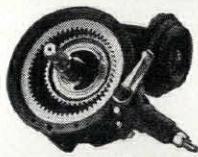
## "COMPLETELY SOLD ON OUR WINKLER"

### SAYS OWNER OF MODERN BOTTLING PLANT

A Winkler Stoker is not only a sure way to improve heating comfort or manufacturing efficiency . . . it is also a safe investment remarkable for the size of its return in cash and labor savings.

The high regard for good engineering and precision workmanship which won five Army-Navy "E" awards for the Winkler plants is evident in every detail of Winkler Stokers. It is the reason why they make economy records . . . why specifiers of automatic coal burning equipment can recommend Winkler Stokers with full confidence.

Write today for descriptive literature



### EXTRA POWER "INTER-PLAN" DRIVE—NO SHEAR PIN!

The well known mechanical advantages of *internal planetary gearing* are ingeniously employed in the Winkler Stoker Transmission. This exclusive design develops a smooth flow of extra power . . . power to crush foreign matter in the coal which might otherwise cause a breakdown. *There is no shear pin in a Winkler!* Motor and mechanism are fully protected by the Winkler Safety Release.

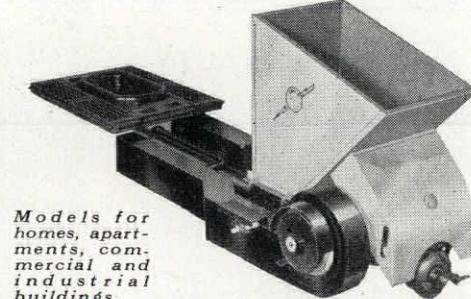
Gentlemen:

You are aware of the careful consideration we gave the matter of purchasing a self-feed stoker for our bottling plant. It is imperative that we have not only efficient, trouble free service from our plant, but the boiler and stoker are located on the same floor as our strictly modern bottling equipment. It is therefore vitally important that we have a job that is absolutely clean.

I am happy to tell you that we are completely sold on our Winkler Self-Feed Model which feeds 100 lbs. of coal per hour, to do the job. In the months that we have operated this unit we have already noted savings that were not possible with our old method.

This stoker meets every claim which you made for it and I am pleased to express to you our complete satisfaction.

Yours very truly,  
(NAME ON REQUEST)  
Manager

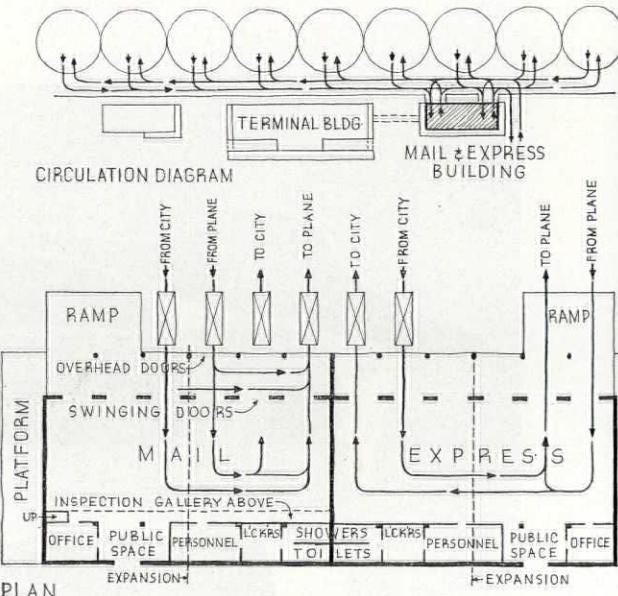


Models for  
homes, apart-  
ments, com-  
mercial and  
industrial  
buildings.

# WINKLER

*fully automatic STOKERS*

U. S. MACHINE CORPORATION, Dept. L-13, LEBANON, IND.



### MAIL AND EXPRESS

In organizing his Terminal Group, Mr. Thompson assigned a separate building to Mail and Express, since this constant element of air transportation has long proven its need for space separate from the main terminal building. In addition, mail and express now handled by the airlines probably will be processed by the Post Office and Express Co. as volume increases. As much of the mail received in bags from planes is not worked at the airport but merely transferred to city-bound trucks, all vehicles are assembled at a single broad platform, thus eliminating the current practice of dragging the bags through the building. Express, however, is worked at the airport, so ramps are provided to allow the tractor-drawn carts to come directly into the building with their parcels, which are later loaded on trucks backed up to the platform. Interior work space should be high and top lighted, with small offices, and proper employee locker and washroom facilities. Floors should be at truckbed level, and the platform well protected by a projecting canopy. Note that here, as elsewhere, ultimate development is shown, a smaller structure being indicated by dotted lines.

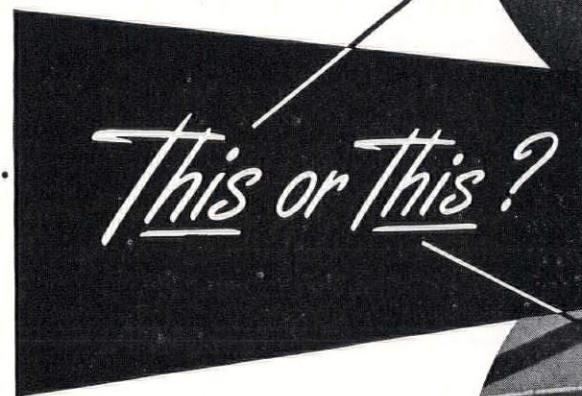
(Continued on page 134)

Ben Schnall



NEW YORK'S terminal, like others, needs a separate mail and express building to relieve congestion. Short truck platform at narrow end of building is obviously inadequate.

# Which would you want for your clients?



Here are two roof-drainage installations. Ordinary galvanized steel was used for one—ARMCO Galvanized PAINTGRIP Steel for the other.

It's plain to see what happened to the top house. Practically all the paint has peeled off the ordinary galvanized gutters. The metal was acid-treated before painting. This not only destroyed part of the zinc coating, but the chemical action set up by the raw-zinc contact dried out the paint oils and caused early peeling and flaking.

Now let's look at the house with the ARMCO PAINTGRIP sheet metal work. The paint is as smooth and protective as the day it was put on. This is the kind of work you'll want people to know you by, the kind that helps build good-will for you.

Remember, *it actually costs less* to use ARMCO Galvanized PAINTGRIP Steel than to use ordinary galvanized steel and acid-treat before painting. Yet PAINTGRIP not only takes paint without weathering or pre-treatment but holds it much longer.

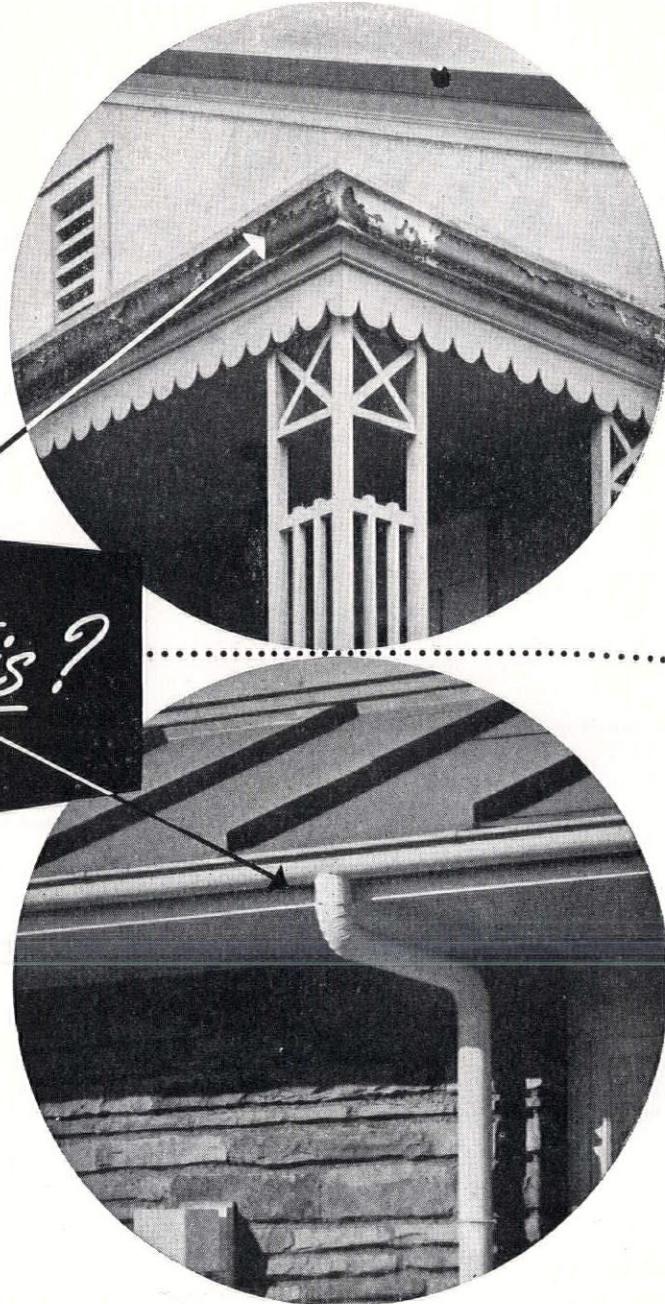
So specify ARMCO PAINTGRIP now—for new homes—for replacements—for all sheet metal work.

**SEE SWEET'S CATALOG** for uses, advantages and general specifications of these Armco special-purpose sheets:

**Galvanized ARMCO Ingot Iron**

**ARMCO Galvanized PAINTGRIP Steel**  
(also available with ARMCO Ingot Iron or Copper-Steel base)

**ARMCO Stainless Steels**



## NEW BOOK HELPS EDUCATE OWNERS

The new Armco book, "Know Your Steel WHEN YOU BUILD OR REMODEL," helps you win acceptance for "quality sheet metals" in home construction and equipment. It tells home builders the importance of having the *one right metal* in the right place. Could you use a few copies to give to people who should have this information? Copies are free. The American Rolling Mill Company, 61 Curtis Street, Middletown, Ohio. Export: The Armco International Corporation.

**THE AMERICAN ROLLING MILL COMPANY**  
**Special-Purpose Sheet Steels**



**BONDERIZED,  
GALVANIZED STEEL  
WALLS,  
ROUNDED STILES**

**Specifications**

SIZES—32 x 32 x 80  
36 x 36 x 80

WALLS — BONDERIZED, GALVANIZED STEEL. Finished inside and out with white baked-on synthetic enamel.

RECEPTOR — Semi-flat standard type precast Stonetex; slipproof, leakproof, nonabsorbent. Brass drain for 2" waste connection cast integral with receptor.

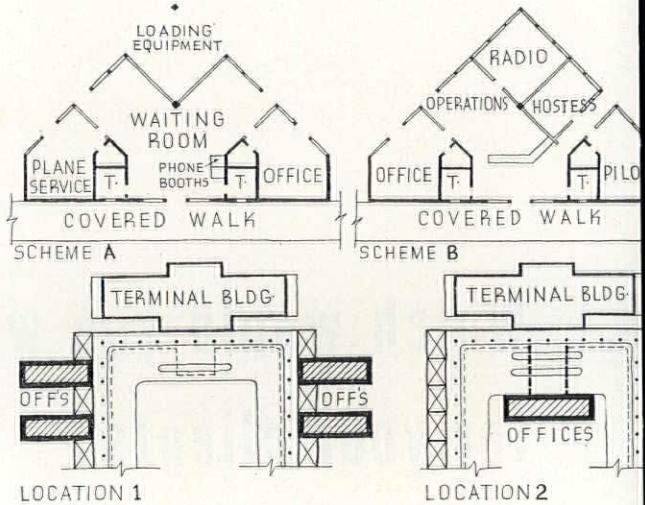
VALVES — Individual compression valves with arm and shower head.

ACCESSORIES — Curtain and soap dish.

**NEW Cadet SHOWER . . .**

Redesigned along modern lines with improved construction features. The Fiat tension locking joint is used on all four corners and in joining the side walls with the receptor. No screws are used in any of these joints. This construction speeds erection on the job and assures a watertight shower cabinet with unusual strength and rigidity.

**FIAT METAL MANUFACTURING COMPANY**  
1205 Roscoe St., Chicago 13, Ill.  
21-45 Borden Ave., Long Island City 1, N. Y. • 32 So. San Gabriel Blvd., Pasadena 8, Calif.



### OFFICES

The amount of floor space eventually needed for offices at a terminal usually exceeds that needed to accommodate passengers and baggage. The kind of space is the same as that for good offices in the downtown section of the city: light and airy, convenient parking, capability of expansion, and flexibility for interchange of tenants. With the increased use of inter-office telephones, many offices could as well be located downtown, but the occupants prefer being located at the air terminal, which, as landlord, should profit from this potential revenue.

As suggested in the plan for the Terminal Area, the various offices needed by air lines, airport administration, the Government and others are best placed in a separate building, or buildings, next to the Terminal Group and connected to it by covered ways, perhaps with the ground level reserved for shops. The diagrams above suggest locations for such buildings; one, by flanking the Terminal Group; the other, by expanding the second floor office space across the entrance drive. Government agencies most likely to require offices at air terminals are Airway Traffic Control, Communications and U. S. Weather Bureau, each installing its own specialized equipment.

Two suggestions for the division of space in the airline operations offices adjoining the Concourse on the Apron are shown at the top of the page. The diagram at the left is for pre-ticketed passengers and those briefly debarking or through flights. The right diagram is a suggested layout of the same area for use by flight operations personnel and equipment.

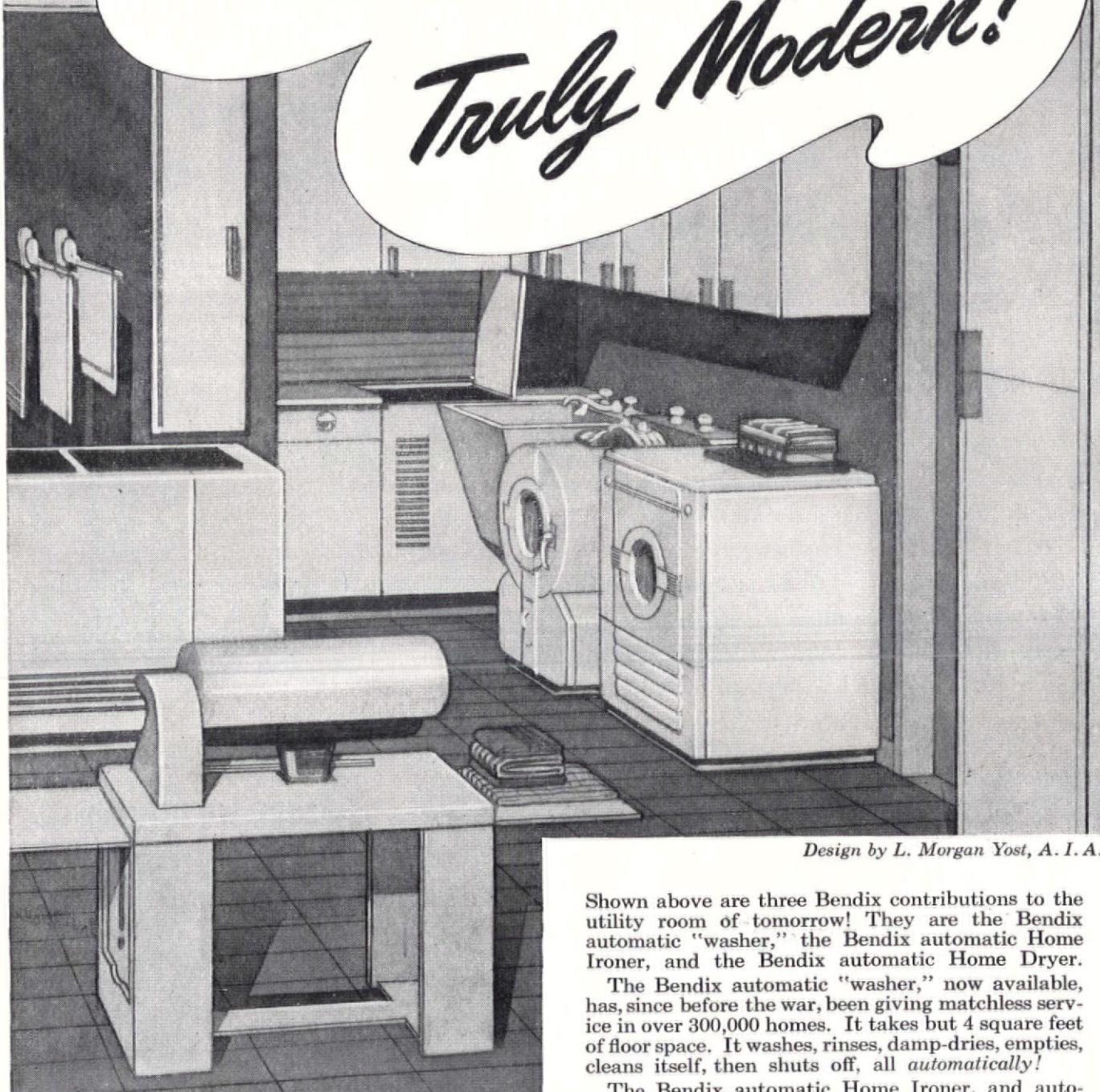
N. R. Farbman



SAN FRANCISCO'S air terminal had no expansion plans and the unfortunate office wing is the result. Design clashes with pretentious tile roof and arcade of main building.

**Bendix automatic Home Appliances  
help make this Utility Room**

*Truly Modern!*



*Design by L. Morgan Yost, A. I. A.*

Shown above are three Bendix contributions to the utility room of tomorrow! They are the Bendix automatic "washer," the Bendix automatic Home Ironer, and the Bendix automatic Home Dryer.

The Bendix automatic "washer," now available, has, since before the war, been giving matchless service in over 300,000 homes. It takes but 4 square feet of floor space. It washes, rinses, damp-dries, empties, cleans itself, then shuts off, all *automatically*!

The Bendix automatic Home Ironer, and automatic Home Dryer will be available soon, to aid still further in the planning of truly modern, beautiful, practical laundries.

Consult your distributor, or write us direct, for complete information on this trio of Bendix automatic appliances for better-home planning.



De Luxe Model

**BENDIX**  
automatic  
**Home Laundry**

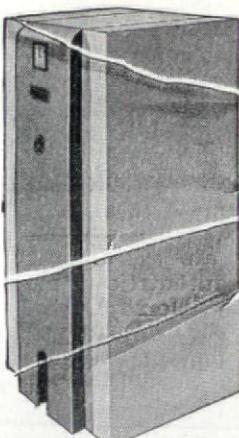
Bendix Home Appliances, Inc., South Bend, Ind. • Pioneers and Perfectors of the automatic "Washer."

BURNHAM'S EXCLUSIVE  
*double*  
*combustion*  
 FEATURE HELPS MAKE THIS FUEL-SAVING BOILER A BEST SELLER

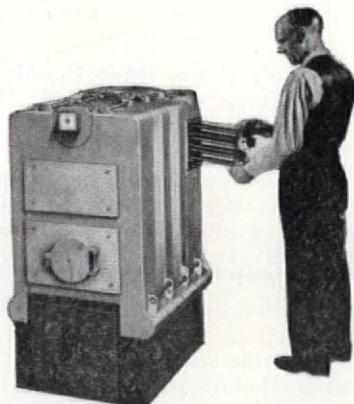
There is an important difference between Burnham's YELLO-JACKET and other types of Boiler—a difference that makes it easier for you to sell. This feature is the exclusive Double Combustion Chamber, which materially increases the area of the direct heating surface so that more heat is delivered to the water in the boiler from the fuel burned.

YELLO-JACKET is a modern, streamlined All-Fuel boiler—burning coal, oil or gas with only minor changes. And every unit is backed by the Burnham name and Burnham

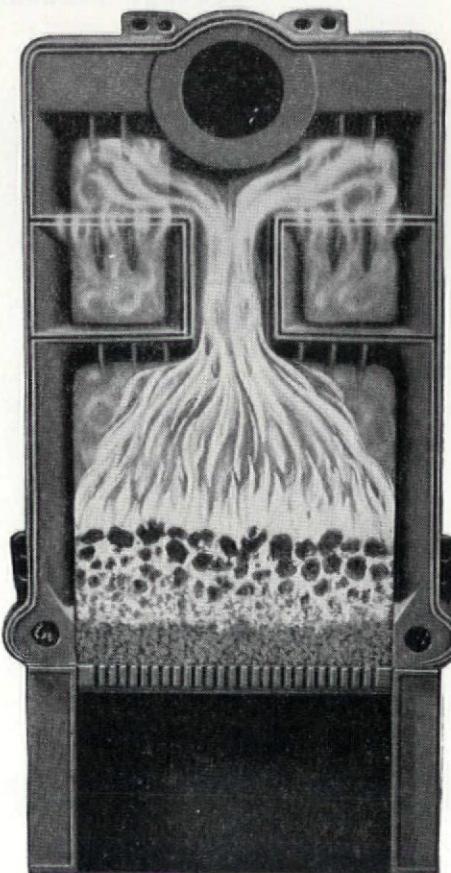
guarantee. This means a lot, when you remember that Burnham's reputation for quality is second to none.



YELLO-JACKET Boiler—fully enclosed, streamlined, and attractively colored—is as handsome as a piece of furniture.



The Burnham YELLO-JACKET Boiler takes either the Built-in Taco Tankless Hot Water Heater or the Built-in Taco for use with Storage Tank.



**Burnham's Latest Development in RADIANT HEATING**



**BURNHAM  
BASE-RAY  
RADIANT BASEBOARD**

Everybody is talking about Burnham's new BASE-RAY Radiant Baseboard. Heats rooms more comfortably and attractively than ever before by radiant rays from a hollow, cast iron "baseboard" which extends along outside walls and is only 7" high and 1 3/4" deep. It's the BIG NEWS in heating—for new homes and modernizing old ones!

**Burnham Boiler Corporation,**

IRVINGTON, N.Y., Dept. AF16

Export Department

50 CHURCH ST., NEW YORK 7, N.Y.



Aluminum roof on Shadyside Academy Junior School, Pittsburgh, Pa. Building designed by Rust Engineering Company of Pittsburgh.



## ALUMINUM ROOFING

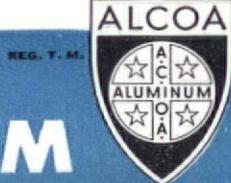
looks and lasts "like a million"

Examination of many roofs of Alcoa Aluminum, at widely separated locations around the country, has demonstrated their lasting ability—aluminum roofs on public buildings, schools, hospitals, industrial buildings, railroad terminals, and the like.

A roof of Alcoa Aluminum adds to the beauty and dignity of a structure. It blends well with other materials, and suits either classic or modern designs.

Suggest to your local sheet metal man that he talk with Alcoa about putting on an aluminum roof. **ALUMINUM COMPANY OF AMERICA**, 2166 Gulf Bldg., Pittsburgh 19, Pa.

**ALCOA** **FIRST IN**  
**ALUMINUM**



# FORD

*the high-wind shingle*

## Cyclone

### SAFETY SHINGLES



This roof was carried 40 feet, with no damage to the Cyclone shingles except that caused by the 2 x 4 studs pushed through the roof.

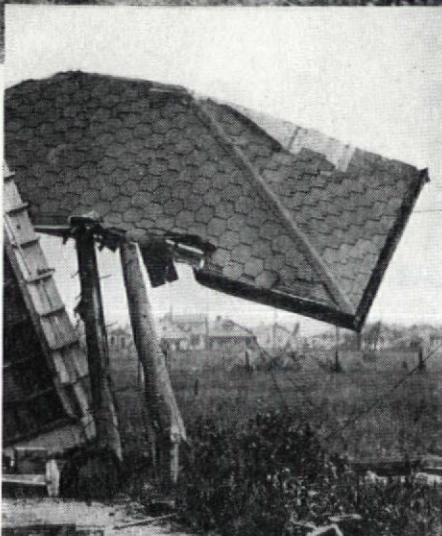
These pictures tell the story. The amazing holding power of Ford Cyclone shingles is being demonstrated constantly on roofs where real wind storms are encountered. Users have developed a confidence in this shingle that makes it one of the most popular shingles in localities where wind damage is common. The simple locking notch anchors each shingle securely to make a truly "locked-to-the-roof" unit of strength.

The Cyclone Safety Shingle is an exclusive Ford product backed by eighty years experience in making roofing materials.

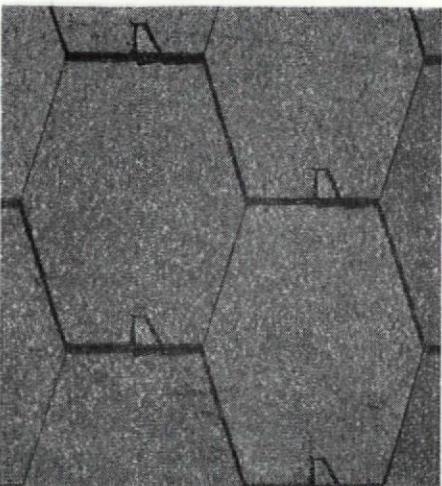
**FORD ROOFING PRODUCTS CO.**  
111 WEST WASHINGTON STREET  
CHICAGO 2, ILLINOIS



ASPHALT ROOFING • SHINGLES • SIDINGS • FORD-Y-NEER



Roof deck blown completely off, but with practically every Cyclone shingle intact.



ALVAR AALTO, Finnish architect, has rejoined the faculty of the School of Architecture and Planning at the Massachusetts Institute of Technology for the fall term. Mr. Aalto was member of the staff in the fall of 1940, when he returned to Finland to direct the national reconstruction program. He has been active in the reconstruction of destroyed towns, and last summer worked on the problems of building shelter in Lapland before the freezing weather set in. In announcing Professor Aalto's arrival, Dean William W. Wurster of the school said that Aalto would begin teaching immediately. His lectures will be based on the combination of city planning and house building.

WOODRUFF HARLAND PURNELL, announces his resignation after 12 years with the architectural staff of the Tennessee Valley Authority to become manager and member of the firm of Gill and Bianculli, Architects, Chattanooga Bank Building, Chattanooga, Tenn.

JOHN W. ROOT announces that Joseph Z. Burgee, Chauncey Sherrick, William Holabird have been made partners and Richard McP. Cabeen, Gilbert P. Hall, David W. Carlson, Helmuth Bartsch have been made associates in the firm of Holabird & Root, Architects, Chicago, Ill.

JOSEPH PALMA, JR., industrial designer and architect, has resigned as Design Director of Product Designers and his association with Mr. W. C. Nichols has likewise been terminated. Mr. Palma has set up his own office in Chicago and is serving a group of manufacturers.

LESTER C. TICHY, New York architect and industrial designer announces that Mr. Leon G. Sherburne, store designer has become associated with him.

MAX SIEGEL, engineer and HARRY F. GREEN, architect are now associated in professional practice as Siegel & Green, Architects and Engineers, 1841 Broadway, New York 2, N. Y.

FRANK F. DROLSHAGEN, architect and V. K. BOYNTON, engineer, have formed a partnership under the name of Drolshagen-Boynton & Associates, located at 647 W. Virginia St., Milwaukee 4, Wis.

DONALD B. MACNEIR, announces the formation of the firm of Macneir, Dykema & Zannoth, Architects, Fort Lauderdale, Fla.

WILLIAM DAVIES EVE and HENRY LOWREY STULB announce the formation of the firm Eve and Stulb, Architects, Atlanta, engaging in the general practice of architecture and the allied arts and sciences, at the Masonic Building, Augusta, Ga.

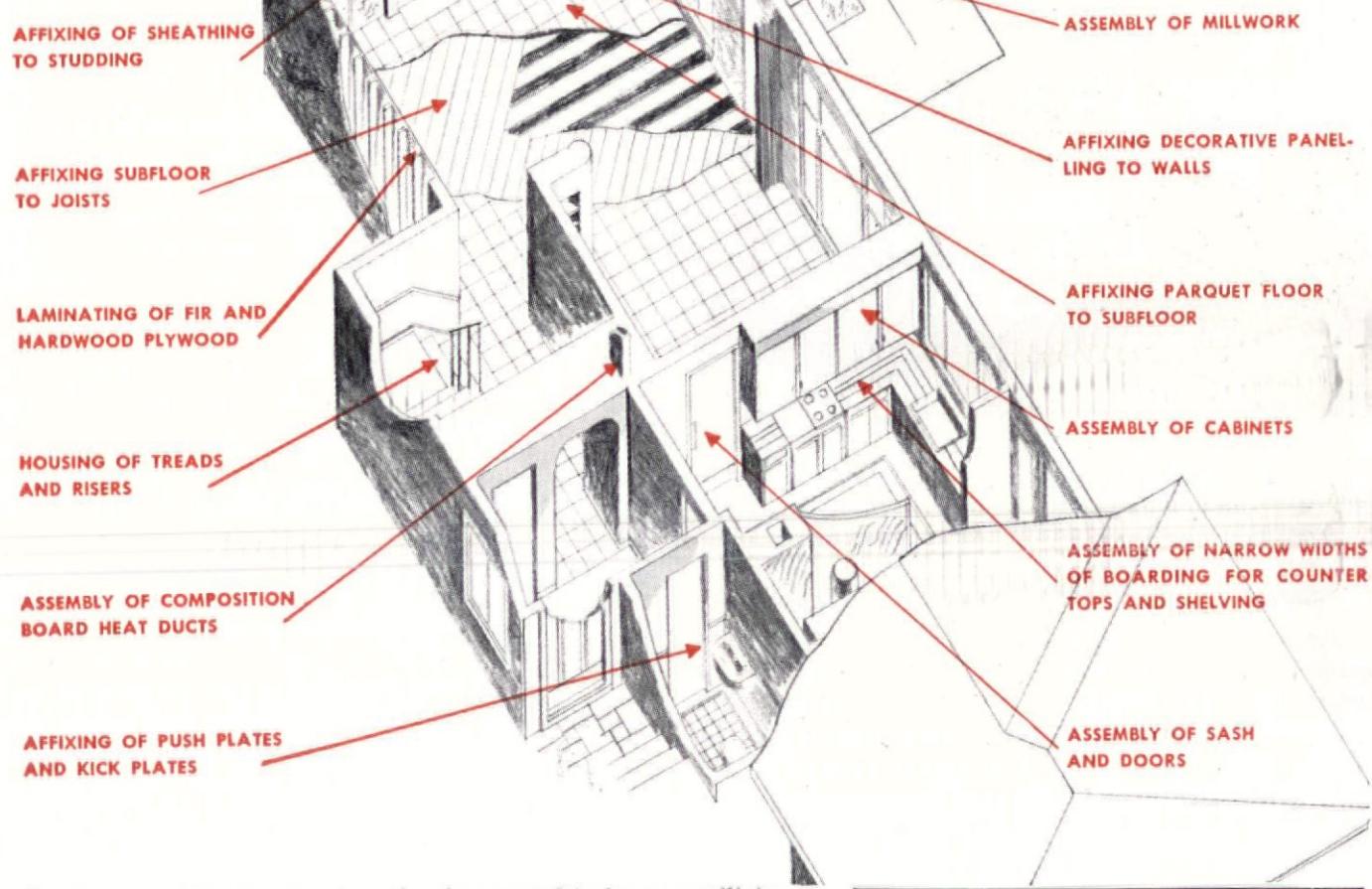
CHARLES A. CARPENTER and C. STORRS BARROWS announce the formation of a partnership for the practice of architecture under the firm name of Carpenter and Barrows, Architects, with offices at 618 Reynolds Arcade, Rochester, N. Y.

FRANCIS L. ABREU and JAMES L. ROBESON announce the association of Matt L. Jorgensen and Frank H. Griggs in the firm of Abreu & Robeson, Architects and Engineers, 22 Main Street Building, Atlanta, Ga. (Continued on page 14)

# TREND

...toward more wood and  
glue in the better homes  
America is about to build

Where Laucks Construction Glues will improve the modern home

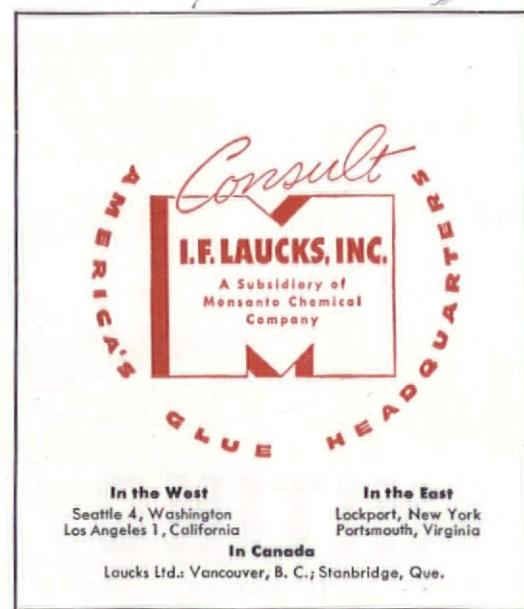


Stronger and better construction is assured in homes utilizing in full the proved techniques of construction with wood and modern Laucks glues.

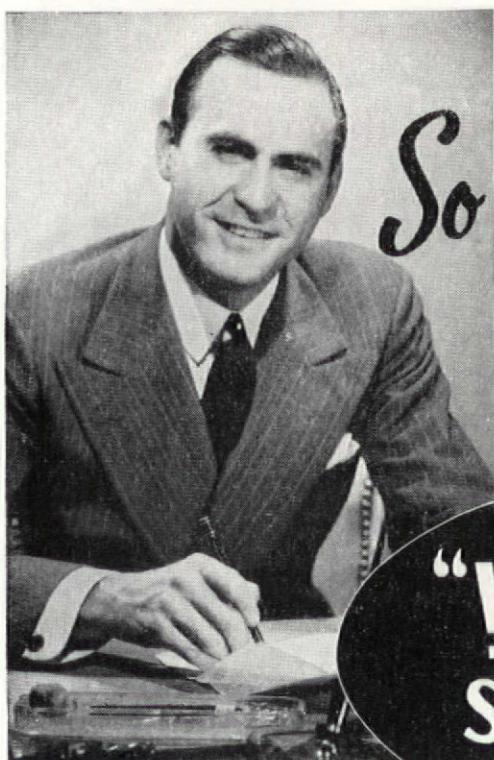
Most important application is in plywood, bonded with modern synthetic resin glues, waterproof, boilproof and fungus proof . . . for use in a hundred places, inside and out, where sounder construction, better insulation, better appearance are desired.

For stressed-cover and dry-built construction, for laminated arches or beams, for built-up members or prefabricated units, for sash, doors and cabinet work there are Laucks Construction Glues, proved stronger than the wood itself, stronger than nails for assembly.

For detailed information on these important uses and others, address your inquiries to "America's Glue Headquarters" where more than a quarter century of experience with plywood and other industrial glues has given us the "know how" from which you can profit.



## ANNOUNCEMENTS



*So the question*

**IS REALLY**

**“WHICH  
Stoker?”**

Anybody in the stoker business can show you evidence of operating economy in mechanically fired coal as against any other method of producing heat. If you want to save money—and who doesn't?—in heating apartments, offices, or other buildings, you want a stoker. If you're planning housing for true efficiency, you can't beat stoker heat.

You can save money with any good stoker. By choosing carefully, after thorough comparison, you will not only get maximum economy, but your tenants or buyers will get greater satisfaction through long years of uninterrupted service. Such comparison and study generally lead to selection of a Whiting Stoker, for very good reasons.

These reasons are interestingly and briefly set forth in a new booklet, "How to Choose a Stoker." We'll be glad to send you a copy free and without obligation. Send for it now—before you make another move about heating any house or larger building.

**WHITING STOKER SALES CO.**  
Suite 2501, 11 S. LaSalle St., Chicago 3, Ill.



**WHITING** *Stokers*  
COMPETENT REPRESENTATION  
IS NEAR YOU

JAMES H. BLAUVELT, former head of James H. Blauvelt and Associates, Manhattan design firm, has become Director of Client Relations for J. Gordon Lippincott & Co., industrial designers of 500 5th Ave., New York, N. Y.

### COMPETITION

Prizes for the best designed Gas Range of Tomorrow, total \$18,000. (FORUM, Dec. '45, p. 16) First award is to be \$5,000, second, \$3,000, third, \$2,000, fourth, fifth and sixth will each receive an award of \$1,000 and the next ten contestants awards of \$500. This Magic Chef gas range design competition closes on March 4. Program requests should be sent to George Nelson, ARCHITECTURAL FORUM, 350 Fifth Avenue, New York 20, N. Y.

### AWARD

Beginning in 1946, annual awards will be made by the Museum of Modern Art to the three outstanding designs of the year in mass-produced objects for everyday use. The awards will not be limited to any specific field and may be conferred upon a tractor or a toothbrush, a canoe or an ashtray, a can opener, lamp, sofa, desk, alarm clock, bicycle, fountain pen, or any other useful object. The annual awards are to be part of a three-way program initiated by the Museum's Department of Industrial Design. The program also includes an annual publication which will catalog currently available consumer goods recommended for their design excellence. To round out the program, and as a guide to the buying public, the Museum is preparing a small seal which manufacturers will be authorized to attach to the products appearing in the book thus providing a visible symbol of the Museum's commendation for design excellence. The first issue of the catalog will be published in the early Autumn of 1946, at which time the awards will be made and the winning designs placed on exhibition at the Museum. It will not be possible to buy space in the book, and no fee will be charged those whose products are shown. Exhibitions in New York and for circulation will be coordinated with the publication from time to time. Eliot Noyes, director of the Museum's department of industrial design, announced the new program at the opening of this year's edition of the Museum's annual exhibition of Useful Objects. (see REVIEWS, page 158)

### NEW OFFICES

GARRETT ECKBO, ROBERT ROYSTON and EDWARD A. WILLIAMS San Francisco landscape architects have opened a second office at 624 South Carondelet St., Los Angeles 5, Calif.

J. D. OHRSTEIN, architectural consultant, has reopened his office at 4707 Broadway, Room 309, Chicago 40, Ill.

ARTHUR O. A. SCHMIDT and Associates, Architects, town planners and designers, announce the establishment of office at 641 Buhl Building, Detroit 26, Mich.

WILLIAM F. R. BALLARD, architect, has resumed his practice with offices at 123 East 77th St., New York 21, N. Y.

JOHN EDWARD MILLER and GEORGE S. VOINOVICH announce the organization of the architectural partnership of Miller & Voinovich with offices at 1011 Swetland Building, Euclid Ave., Cleveland, O.

(Continued on page 142)



# DOUGLAS FIR DOORS PRECISION-MADE

— to assure trim, attractive installations, avoid danger of "butchering" on the job!

## FACTRI-FIT SPECIFICATIONS \*

### PRE-FIT

Douglas Fir Doors are cut to exact net book sizes listed in U. S. Commercial Standard 73-43 . . . are scuff-stripped for protection . . . grade-marked for easy identification and correct specification. They reach you trimmed and ready to hang.



### FACTRI-FIT

Douglas Fir Doors—now available—are not only prefit, scuff-stripped and grade-marked—but gained for hinges and bored for locks as well. All machining is done at the mill by high-speed, clean-cutting precision tools that assure a correct job every time.

### PRE-PRIMING

of Douglas Fir Doors—now available—adds still another advantage to the precision steps outlined above. Pre-priming saves on-the-job finishing time, reduces moisture absorption and improves dimensional stability.

Send for Catalog showing complete line of Douglas Fir Interior Doors, Tru-Fit Entrance Doors, and new specialty items. Sent free to any point within the United States.

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DOORS**  
**FIR DOOR INSTITUTE**  
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THE NATIONAL ASSOCIATION OF FIR DOOR MANUFACTURERS

#### FACTRI-FIT GAINING



7" from top, 11" from bottom. Standard butt on 1 3/8" doors, 3 1/2" x 3 1/2"; on 1 3/4" doors, 4" x 4". Square corners. Center gaining for heavy construction is equi-distant between.

#### FACTRI-FIT SIZES

Doors prefit to exact net book sizes listed in U. S. Commercial Standard 73-43. Doors scuff-stripped for protection.

#### FACTRI-FIT GRADES

Doors are grade-marked for easy identification and specification.

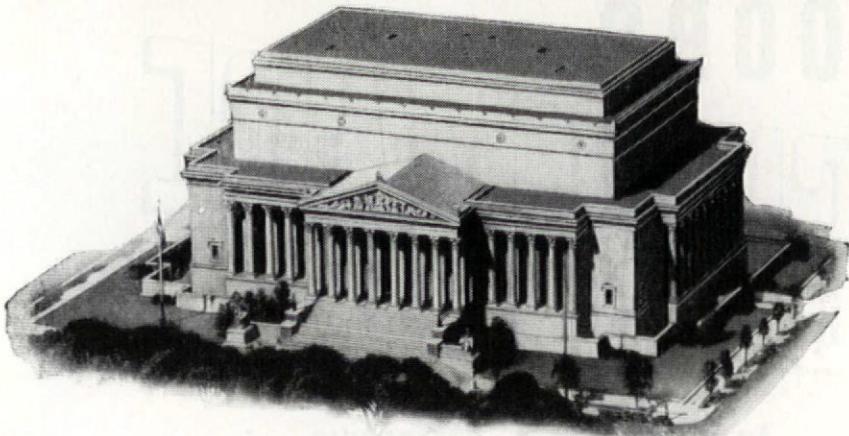


#### FACTRI-FIT LOCK BORE



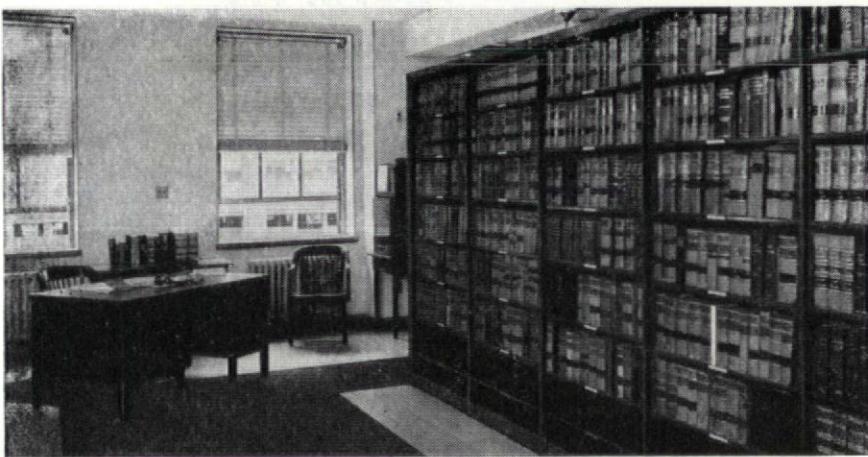
All boring to center knob 3 6/8" from bottom of door. Diameter of bore-in, 15/16"; length of bore-in, 3 3/4" from edge; face plate, 1" x 2 1/4" x 1/16", square shape, cross-bore, 5/8" diameter on 2 3/8" center. These standard specifications fit virtually all nationally-distributed hardware. Other machining on special order.

# It's BREEZE for BOOKSTACKS



The National Archives Building, Washington, D.C., for which Breeze furnished 12,000,000 lbs. of special shelving and record-storage equipment.

## *-from Archives to Offices*



One corner of the Breeze Bookstack-equipped Law Library in the Cincinnati Court House, Cincinnati, Ohio.

The Breeze reputation for quality manufacture, based upon nearly two decades of product performance in the aviation, automotive, and marine fields, finds characteristic expression in Breeze Bookstacks. Functional in design, with the eye-appeal of fine furniture, Bookstacks by Breeze range from standardized models for the housing of special library reference works to multiple units for the storage of archival records and large book collections.

If you are planning a new library—large or small—or considering the modernization or expansion of an existing installation, send today for

the Breeze Bookstack Brochure. Prepared especially for librarians, architects, and business and professional men, this booklet is more than just a catalogue—it's a guide to the proper use and disposition of metal library equipment.

# BREEZE

*Corporations Inc.*

NEWARK 7 NEW JERSEY



A. CARL STELLING, landscape architect and site planner, recently with Civil Engineer Corps., U. S. Navy, announces the reopening of his office at 77 Park Ave., New York 16, N. Y.

NAIRNE W. FISHER, architect, has opened his office at 111 West Washington St., Chicago 2, Ill. and is specializing in educational, hospital and ecclesiastical architecture.

W. F. RUCK, AIA, architect, announces the reopening of his offices at 940 S. Figuerda St., Los Angeles 15, Calif.

VAN WILLIAM KNOX, Jr., AIA announces the opening of his office for the practice of architecture at 905 Sweet Building, Fort Lauderdale, Fla.

KARL WIEGER, has established his office in San Diego at 441 C. St., San Diego 1, Calif.

HAROLD H. FISHER, architect, announces the opening of his office at 1605 Industrial Bank Building, Detroit 26, Mich., for the practice of church, industrial, commercial, institutional and residential architecture.

R. GRAHAM JACKSON, architect, has reopened his offices in Houston for the practice of architecture and is temporarily located at 1837 Kipling St., Houston 6, Texas.

GEORGE FRED PELHAM, architect, has opened offices at 19 W. 44th St., New York 18, N. Y. and in addition to regular architectural practice, will specialize in airport and airport terminal building design. Mr. Pelham has associated offices in Miami, Fla.; Venezuela and London, England.

JAMES SUYDAM JONES, architect, announces the resumption of the general practice of architecture at 17 E. 42nd St., New York, N. Y.

JOSEPH W. HART, has established his office for the practice of architecture at 510-511 Cotton States Building, Nashville, Tenn.

FAION E. LOTT, architect, announces the opening of his office at 12 E. Pleasant St., Baltimore 1, Md.

GEO. M. FOULKS, architect, has returned to the practice of architecture and has established offices at 625 12th St. Northwest, Canton 3, O.

W. B. COHAN, architect and engineer, has opened his office at 624 South Michigan Ave., Chicago 5, Ill., for the practice of architecture, structural engineering and industrial design.

MARVIN J. NEIVERT, architect, has new offices at 17 E. 42nd St., New York 17, N. Y.

NOAH N. SHERMAN and ALEXANDER ZAMSHNICK, architects, announce the forming of a partnership for the general practice of architecture with offices at 62 William St., New York, N. Y.

RUTH GERTH and GEORGE KOSMAK, announce their new addresses: Business, 1226 Sutter St., San Francisco 9, Calif.; Home, 985 Union St., San Francisco 11, Calif.

### CHANGE OF ADDRESS

PAUL BEIDLER, architect, has established, in addition to his office at 40 Exchange Place, New York 5, N. Y., a winter office at Sarasota, Fla.

(Continued on page 146)

# SYLVANIA NEWS

## ARCHITECTURAL EDITION

JANUARY Published by SYLVANIA ELECTRIC PRODUCTS INC., Salem, Mass. 1946

## TWO NEW RESIDENTIAL FIXTURES, ANNOUNCED BY SYLVANIA, STRESS QUALITY AND SIMPLICITY

### *Home Fixtures Designed to Fill Big Demand Shown in Survey*

The most recent additions to the long line of Sylvania Electric fluorescent fixtures are two new residential units—stressing quality and simplicity.

These fixtures are in line with the postwar trend towards fluorescent lighting in the home, a trend that is rapidly changing domestic lighting ideas. According to a recent, impartial survey made for Sylvania by one of the country's largest market research organizations, installations are planned by 11,931,000 families. Many more installations are expected, now that these attractive fixtures have been designed for the home.

Architects who are interested in incorporating the latest lighting techniques into the modern home, will find the new Sylvania Electric residential fixtures adaptable to a wide variety of home applications. And, like Sylvania commercial and industrial fixtures, these new units are destined to become leaders in their field. Write to Sylvania, or call upon the local Sylvania representative, for full information on the complete line of Sylvania fluorescent fixtures.

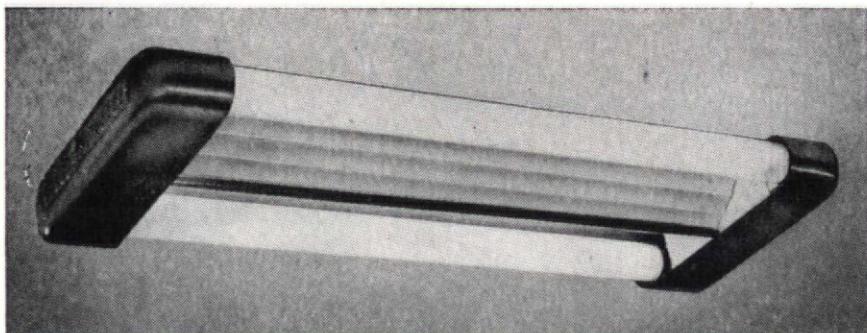
### **FACTS FROM THE RESIDENTIAL LIGHTING SURVEY**

Of those who *have* fluorescent lighting:

- 30.4% plan kitchen installations
- 24.6% will install in the bathroom
- 15.2% will install in the living room
- 8.0% in the bedroom

Among those who *have not* fluorescent lighting at the present time:

- 64.4% plan kitchen installations
- 14.2% living room
- 9.1% bathroom
- 1.9% bedroom

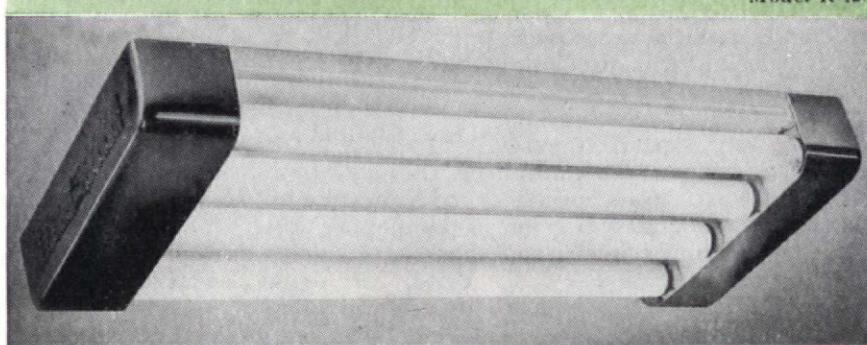


Model R-220



Fluorescent Light Distinguishes the Modern Home

Model R-420



# SYLVANIA ELECTRIC

MAKERS OF FLUORESCENT LAMPS, FIXTURES, WIRING DEVICES; ELECTRIC LIGHT BULBS; RADIO TUBES; CATHODE RAY TUBES; ELECTRONIC DEVICES



# Lumite

*-the screen that lasts!*

• Metal screens may rust or corrode . . . but **not LUMITE!**

Neither rain, snow, smoke nor even salt spray has any effect on LUMITE! It won't stain sidewalls or sills and never needs painting. A damp cloth cleans LUMITE in a jiffy.

And, where ordinary screens bulge or dent, LUMITE\* (modern plastic insect screen cloth) snaps right back to its normal flatness! Its toughness lies in unusual tensile strength and amazing resilience.

Tested daily for years, under

(\*Woven of Saran, Product of Dow Chemical Co.)

the severest battle conditions, LUMITE outlives average screens because natural causes can never affect it. No postwar building plan can be considered complete unless specifications call for LUMITE!

**LUMITE NOW RELEASED!  
FREE SAMPLES ON REQUEST**

With cancellation of some Army and Navy contracts, Chicopee is now making LUMITE for civilian uses in a rich dark green color. Write to us today for further information.

**Tested in War—Available Now**

Many millions of feet of LUMITE screening have been used successfully to protect the Armed Forces against disease-bearing insects. Men who saw LUMITE "under fire" are your customers today . . . and they're sold on LUMITE already!

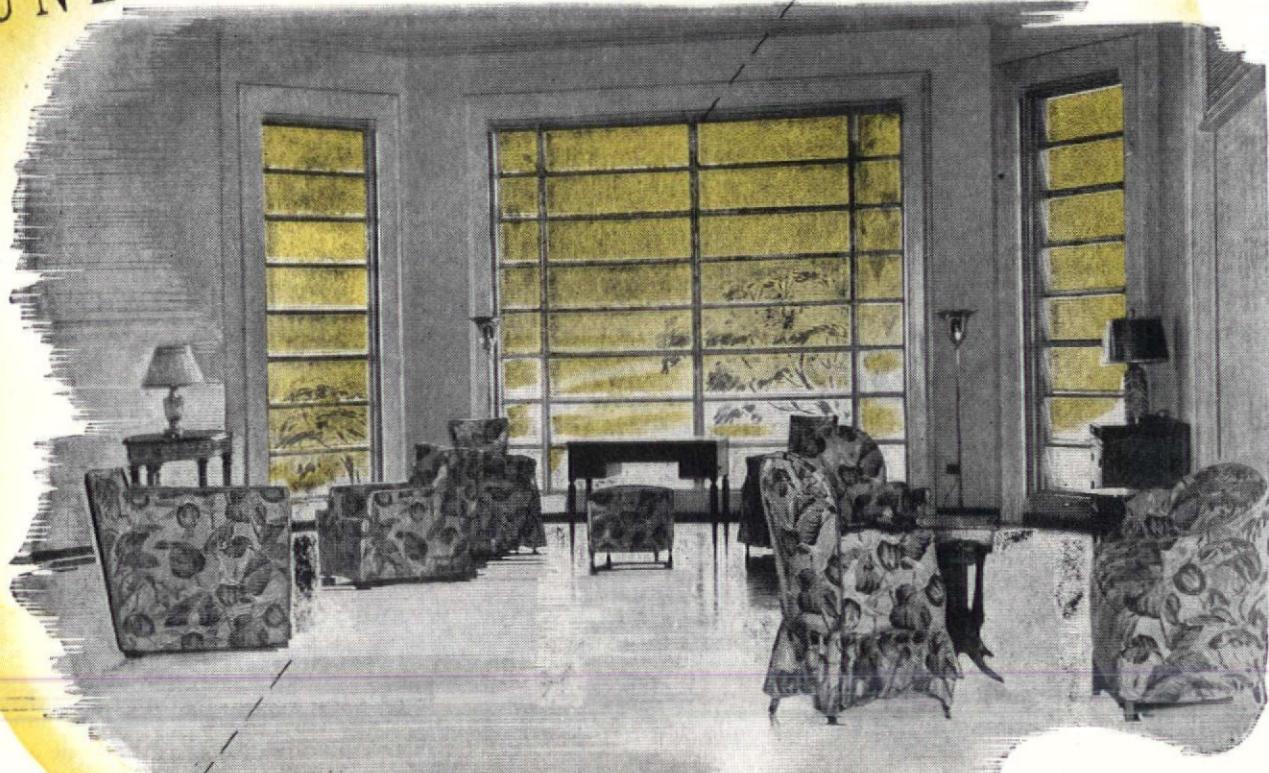
- ★ Cannot stain sills or sidewalls.
- ★ Never needs painting . . . non-inflammable.
- ★ Easy to clean with a damp cloth.
- ★ 100% Rustproof under any conditions.
- ★ Strong, resilient . . . can't dent or bulge.
- ★ Competitively priced with better grades of wire screen cloth.



CHICOPEE MANUFACTURING CORPORATION—LUMITE DIVISION  
47 WORTH STREET, NEW YORK 13, N.Y.

*World's largest makers of Plastic Screen Cloth*

SUNLIGHT and FRESH AIR



an endless supply available with  
**Truscon MAXIM-AIR steel windows**

• The Maxim-Air Window is particularly adapted for use in warm climates, or for enclosed porches or solariums in any location where it is important to provide a free circulation of air in inclement weather as well as on sunshiny days. Detention type windows in this design are made with glass heights as low as five or six inches for use in psychiatric institutions.

The Maxim-Air window provides approximately 100% ventilation with the simultaneous operation of all ventilators by mechanical means. For window units in widths up to 11 ft. 8½ in., and heights up to 11 ft. 11½ in., (provided ventilator height does not exceed 16 in. and total area does not exceed 80 sq. ft.) the Maxim-Air Louver Window offers many advantages which recommend its selection.

Through the wide variety of Truscon Steel Windows you can best solve the lighting and ventilating problem of each individual type of structure you are planning. See SWEET'S for details.

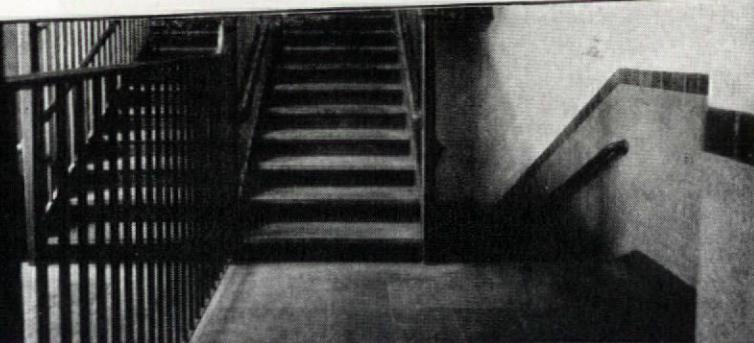
**TRUSCON STEEL COMPANY**

YOUNGSTOWN 1, OHIO • Subsidiary of Republic Steel Corporation

Manufacturers of a Complete Line of Steel Windows and Mechanical Operators . . . Steel Joists . . . Metal Lath . . . Steeldeck Roofs . . . Reinforcing Steel . . . Industrial and Hangar Steel Doors . . . Bank Vault Reinforcing . . . Floodlight Towers . . . Bridge Floors.

## ANNOUNCEMENTS

# A SAFE FOOTING FOR HURRYING FEET...



Alberene Stone Treads and Landings, Woodrow Wilson High School, Washington, D. C., Nathan Wyeth, Architect.

## ALBERENE STONE TREADS

For more than 40 years Alberene Stone has been the choice for treads, platforms and floors subject to severe daily use in schools, hospitals and public buildings. Its natural highly-toothed surface is safe, wet or dry. The selected, extremely hard Tread Stock meets every requirement of durability, upkeep and appearance.

The regular grade Alberene Stone is equally popular for toilet and shower compartments. Tongue-and-groove interlocking construction produces liquid-tight joints. Its light, blue-gray color is harmonious and the stone is close-grained and practically non-absorbent and non-staining. For complete data and samples please address Alberene Stone Corporation of Virginia, 419 — 4th Ave., New York 16, N. Y. Quarries and Mills at Schuyler, Virginia. Sales Offices in principal cities.

## ALBERENE STONE

THE NATURAL STONE OF DIVERSIFIED UTILITY

CARLOS B. SCHOEPL, architect, has removed his office to 2818 Biscayne Blvd., Miami 37, Fla.

BRUNO DE PAOLI & Co., Inc., announce the removal of their offices to 531-533 Van Nest St., New York 60, N. Y.

PAUL HYDE HARBACH, architect, is now located at 507 Franklin St., Buffalo 2, N. Y.

JACOB MARK, consulting engineer, has moved his office from Brooklyn to 551 5th Ave., New York 17, N. Y.

WILLIAM HENRY ROWE, architect, announces the relocation of offices at 214 Front St., San Francisco 11, Calif.

ABRAHAM BLUESTONE and ENOCH BLUESTONE, announce the removal of their office to 150 Nassau St., New York 7, N. Y., where they will continue their practice under the firm name of Bluestone & Bluestone, structural engineers.

MANOOG EXERJIAN, architect, has relocated his office at 140 So. Middle Neck Rd., Great Neck, N. Y.

WEIDNER & Co., architects announce the removal of their offices to 609-610-611 Alamo National Building, San Antonio 5, Tex.

MESSRS. LISTER HOLMES & Co., auctioneers, surveyors, valuers and estate agents announce that they have had to vacate their offices at 7 Park Lane, London, W. 1. England and since October have been practicing from 14 Clarges St., Mayfair, London W. 1. England.

### DIED

JOHN R. HELMS, housing and planning authority, on December 3 at Swarthmore, Pa., at the age of 55. As technical advisor, Mr. Helms aided in the development of a \$2 million slum-clearance project in Chester, Pa. He was executive vice-president of the Pennsylvania Housing and Town Planning Association, secretary of the Pennsylvania State Housing Institute, a member of the National Association of Housing Officials, chairman of the Chester Citizens Committee on Housing and consultant to the Delaware County Housing Authority. He was a graduate of Drexel Institute of Technology and the University of Pennsylvania.

JOHN P. COLLIER, with the American Radiator & Standard Sanitary Corp. and predecessor companies for the past 38 years, in Chicago, on Nov. 21st, at the age of 63. Mr. Collier was most recently in a position of responsibility in the Company's Chicago sales office.

PROFESSOR J. BURN HELME, a member of the department of architecture at the Pennsylvania State College since 1925, at the age of 48, in Pennsylvania, on November 12th. Professor Helme held the degrees of Bachelor of Applied Science and Master of Architecture from the University of Toronto and a Master of Arts degree from Harvard. In addition, he did graduate work at the Ecole des Hautes Etudes Urbaines at the Sorbonne, Paris; at the Ecole des Beaux Arts, Fontainebleau; and at Harvard. Professor Helme edited a technical bulletin on low cost housing published by the College in 1936 and has contributed articles to many professional journals. He was a member of the following organizations: AIA (past president), American Association of Museums, College Art Association, Ontario Association of Architects, Royal Architects of Canada and Town Planning Institute of Canada.

*If You Built a Stairway to the Stars,*  
**WE COULD  
CARPET IT  
FOR YOU!**

Yes, we could even fashion rugs to cover the floors of your "castles in the air" . . . no matter what their size! Builders, designers, industrial decorators . . . you may plan interiors with the confident knowledge that the rug of your choice can be made by RUGCROFTERS, INC.

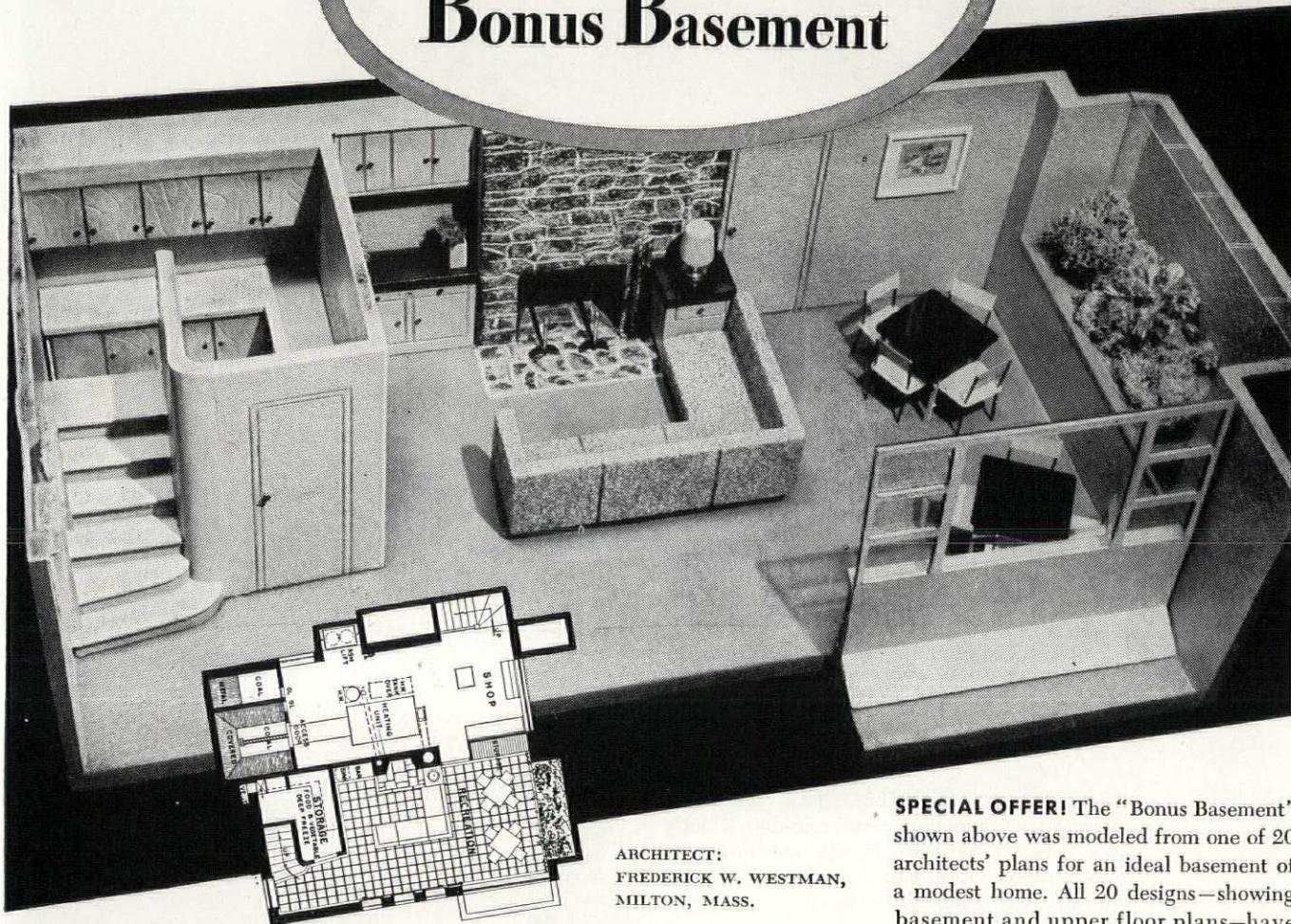
Send for RUGCROFTERS, INC., illustrated informative brochure that explains clearly our special services in the designing of custom-made rugs and broadloom carpeting in any size, color or pattern!

Our 100% seamless hand-made rugs, and carpets have the durability and adaptability for any type of edifice . . . a hotel, modern apartment house, private home, theater, store, office, civic building or institution.

Inquiries are cordially invited. RUGCROFTERS, INC., is equipped to solve all your floor-covering problems . . .

**RUGCROFTERS, Inc.**  
*"Contemporary Art in Rugs and Carpeting"*  
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**H**ere's the thing to do  
*if you want your home to have a*  
**Bonus Basement**



**W**hat you see pictured above is a basement recreation room such as most prospective home-builders figure on having in their new homes. And if you want to get *yours* on mighty attractive terms, here's the thing to do: *decide to heat with Bituminous Coal* when you build or remodel your home. Why? Because you can then have a "Bonus Basement"—furnished and paid for in only a few years' time by savings that come from burning this low-cost, modern fuel.

Yes, *modern!* For, when burned in one of the marvelously efficient new

stokers, Bituminous Coal is an "automatic" fuel—even to the point of ash removal. Clean, quiet, odorless, smokeless. And, of course, coal heat is the most dependable, most uniform type of home heat. That's one reason why 4 out of every 7 homes in the U. S. burn coal!

If you'd like to receive further information—as well as professional help in planning your "Bonus Basement"—take advantage of the special offer described at the right. Then talk it over with your architect or builder. *Bituminous Coal Institute, 60 East 42nd Street, New York 17, N. Y.*

**SPECIAL OFFER!** The "Bonus Basement" shown above was modeled from one of 20 architects' plans for an ideal basement of a modest home. All 20 designs—showing basement and upper floor plans—have been reproduced in a helpful and informative book. While the edition lasts, we will send you a copy for the special price of only 10¢ postpaid. Mail your request to the address printed below.

**A WORD TO THE WISE!** Most houses are now designed to permit the use of Bituminous Coal. Be sure you can have the advantages of this low-cost, dependable fuel in your new home. A little care in planning for coal storage and a chimney flue of normal size will assure that you can enjoy the health, comfort and dependability that only modern coal heat can give you. And it will also assure you of *economical* heating for the life of your house, because this country's 3,000-year coal supply makes certain that shrinking reserves will not force coal prices upward.

FOR ECONOMY, DEPENDABILITY, AND HEALTHFUL HEAT . . . YOU CAN'T BEAT BITUMINOUS COAL

(This is one of a series of advertisements now appearing in home-makers' magazines)

# Trouble-Free Kelvinators



## COST LESS TO OWN!

Whether it's for homes or apartments, you'll find it profitable to install Kelvinator refrigerators. For thirty years' experience in producing fine refrigeration equipment has given Kelvinator craftsmen and engineers unusual know-how in the design and construction of lastingly dependable refrigerators.

Powered by the famed Polarsphere unit—sealed in steel and lubricated for life—Kelvinator refrigerators have an unmatched record of trouble-free performance!

That's why Kelvinator refrigerators **cost less to own!** For trouble-free performance means greater user satisfaction . . . fewer replacements, less maintenance, longer life!

For complete information and details on availability, consult your Kelvinator dealer. Find his name and telephone number in the classified section of the phone book. Or write Kelvinator, Detroit 32, Mich.

### WHAT PROPERTY MANAGERS SAY

..... in letters now in Kelvinator's files:

**NEW HAMPSHIRE**—"Practically no tenant complaints have been received regarding the efficiency of . . . our 800 Kelvinator electric refrigerators."

**NEW JERSEY**—"We have 51 Kelvinators and they have been in constant use for two and one-half years, and during that time we have had only one complaint and that was of minor nature . . . I would gladly recommend Kelvinator to any prospective buyers to be a good and sound investment."



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DIVISION OF NASH-KELVINATOR CORPORATION, DETROIT  REFRIGERATORS • ELECTRIC RANGES • HOME FREEZERS • HOT WATER HEATERS

# G.I. JOBS

## When it's CHROMEDGE\*

You get the advantages of

## CONTROLLED QUALITY

from INGOT



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B & T

does

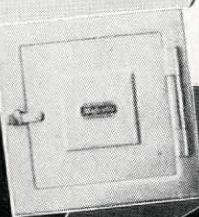
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UNDER ONE ROOF!

Chromedge offers everything in decorative trims—hundreds of shapes and sizes for every floor and wall covering need—with all flanges finely tapered for ease and economy of installation. Write for new pocket catalog today!

\*CHROMEDGE is the exclusive, registered trade name for extruded aluminum alloy and rolled metal trims manufactured solely by B & T Metals Co.

**The B&T Metals Company**  
COLUMBUS 16, OHIO

## Two More FORMED STEEL Units by Majestic



### Clean-Out Doors Ash Dumps

\* All of the structural advantages of heavy-gauge formed steel—proven in numerous war-vital products made by Majestic—are now featured in many items of the regular Majestic line, including Circulator Fireplace Units, Underground Garbage Receivers, and Home Incinerators.

When planning for long, satisfactory service, specify these rugged formed steel Majestic building products! Majestic Clean-Out Doors feature positive mortar locks and close-fitting, free-acting doors. Stack-type Clean-Out Doors have heavy-duty malleable iron hinges for positive anchorage. Majestic Ash Dumps feature easy-operating lids securely hinged to permanently prevent dropping out. The Majestic line also includes accurately counterbalanced automatic ash dumps. Write for full details.

**The Majestic Company**

1047 Erie Street, Huntington, Indiana

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### FREE SERVICE FOR DISCHARGED VETERANS

To aid discharged veterans secure professional and executive employment in the building industry, THE FORUM will publish without charge classified ads giving applicants' qualifications, stating preference in occupation and location. Ads may be run with name and address or with box number.

Employers seeking personnel are urged to make known their requirements. Address: G.I. Job

THE ARCHITECTURAL FORUM  
350 Fifth Avenue, New York 1, N.Y.

### POSITIONS WANTED

STRUC. ENG.—7 yrs. exper. wood, steel, mech. and arch. design. Age 28. Versatile, prac. Want pos. with arch. with poss. future partnership. West Coast. Ex Army Off. Box E-158.

ELEC. ENGINEER—28, exper. in drafting and as coll. instr. Grad. work in elec. eng. Desires eng. or acad. position. Box E-159.

ENGINEER—37, Capt. AUS, desires perm. pos. 15 yrs. exper., constr., design, and layout. Chief of Design Sect. on foreign based constr. Africa. Contracting Constr. Off. Near and Middle East Proj. Box E-160.

GENERAL ASST.—to bldg. contractor. Expediting, drafting, rendering, meeting clients. Exper. in design and constr. of small homes. Famil. with trad. and mod. design. Young, married, aggressive. Box E-161.

YOUNG MAN—Qualified by 20 yrs. blue-printing experience to establish and operate a Cooperative Blueprint Project for a group of architect-engineers on a non-profit, mutual aid basis. Space 20 x 30 feet sufficient. Ref. from both private and government sources provided. Write for details to Giles Williams, 85 Livingston Ave., Albany, N.Y.

ARCHITECT—Discharged Army Engineer Officer (Maj.) 27, graduate in architecture, 6 yrs. experience in administration, architectural design, supervision of all types construction. During war served as Resident Engineer on cantonment and airfield projects totaling \$35 million. Interested in position with arch-eng. organization in exec. capacity. Consider overseas assignment. Min. salary \$6,000 per annum. Box E-162.

GRADUATE ARCHITECT—28, varied construction and office exper. Chief draftsman and instructor in the Army for past 2 years. Desires position with firm designing modern houses. Box E-163.

CIVIL ENGINEER—27, B.S. in Civ. Eng. in 1940. 1 yr. experience county engineer; 54 months service Engineer Corps. Married, available upon discharge late November. Will accept position abroad. Box E-164.

ARCHITECT—37, recently released Marine officer, registered arch. in Massachusetts. Married, desires position leading to partnership in Northeast, Northern Middlewest, or Northwest. 10 yrs. varied architectural experience. Box E-165.

ARCHITECTURAL DRAFTSMAN—B.S. in Arch. University of Cincinnati 1942. Winner "Illuminating Engineering Society Arch. Sectional Competition" 1942. Exper.-2 yrs. Illuminating Layouts for stores, offices and factories. Army, 6 months struc. draftsman and artist. No locality preferences. Box E-166.

ARCH. ENGINEER—Lt. Cmdr., Naval Reserve, arch. eng. graduate prior to active duty in the Navy, to be released in January desires job with prominent architect or construction company preferably on either coast. Excel. personality and good technical and administrative ability. Box E-167.

ACCOUNTANT—Former real estate broker, 16 years all-around exper., some sales. Univ. grad., seeks position with real estate builder or developer. Box E-168.

ARCHITECT—33, 6 yrs. pre-war exper. in France. 3 languages. Disch. from U.S. Engr. Corps. Served in France. Wants contacts with financiers, mgfrs. or contractors intending to do business abroad. Box E-169.

MGR.-ENGR.—Avail. to constr. org. or mgfr. of bldg. products. Excel. record and backgr. with business and prof. exper. Reg. Arch. Western or Mid-west location pref. Box E-170.

ARCH. DESIGNER—25, married. Exper. in arch. design. Desires pos. with small arch. firm, pref. in East, while working on B. of Arch. degree. Box E-171.

LANDSCAPE ARCHITECT—Vet., 27, married. B. S. Univ. of Cal., 2 yrs. nursery exper. Desires Calif. pos. with future in city planning off. or estab. firm. Box E-172.

ARCH. DESIGNER—27, ex-Lt. Comdr. USNR, Grad. MIT School of Arch. second in class and first in arch. design. Exper. along arch. & exec. lines in Navy. Wants pos. where long-range opportunities warrant. Box E-173.

BLDRS. ASSOCIATE—Vet., 32, wishes investment-profit-participation working arrangement with mass prod. minded arch-blrd. needing responsible man exper. in indus. cost and work simplification methods. College degree, married. Some sales promotional and bldg. material exper. No location pref. Box E-174.

BLDG. TRADES—2½ yrs. coll., studying arch. drafting evenings. Desires work with small contractor to learn brick, cement, wood bldg. Will consider associated work. Ex-officer, married, 26. Box E-175.

ARCH. REPRESENTATIVE—Young man, 20, free to travel. Would like employment with arch. firm as repre. Expect to be out of service Jan. '46. Box E-176.

PROF. LANDSCAPE ARCH.—32, married, dependable. Desires pos. with future with estab. firm or release from Army in Spring. 6½ yrs. exper. Knows park, golf course, home design, erosion control, stone, concrete and reinforcing work. Box E-177.

ECONOMIST—Trng. in eco., business adm., acctg. Desires connection with progressive constr., prefab. or housing research organ. Will go anywhere in U.S. Box E-178.

MECH. ENGR.—Capable, aggressive young man desires perm. connection with engr. concern or firm of consulting engrs. 6 yrs. varied indus. exper. Married, family. Box E-179.

ARCHITECT—27, single, Carnegie Tech. Grad. 5 yrs. exper. designer and draftsman. Supervised constr. 1 yr. in Puerto Rico. Ambitious, pleasing personality. Desires pos. with reliable, high standing org. Interested in sales and travel. Box E-180.

SALES ENGINEER—37, Army office on terminal leave, 30 yrs. exper. structural and civil design and heavy construction. Desires pos. on East or West Coast in sales or promotion of arch. or engr. equipment lines. Willing to travel. Box E-181.

AGENCIES—Wanted for eastern North Carolina. Veteran exper. in sales and merchandising, opening office as manufacturer's agent for bldr's. materials. Write Box 615, Fayetteville, N.C.

MANUFACTURER'S REPRESENTATIVE—Young man, thoroughly trained in constr. industry, just released from Army, wants connection with manufacturer of building products and specialties. Phila. and southern New Jersey territory. Commission basis only. Box E-182.

MANUFACTURER'S REPRESENTATIVE—Experienced man desires to represent building manufacturers in Minneapolis, St. Paul and surrounding territory. Univ. grad. AAF officer, 26 yrs. old, released December 1. Box E-183.

DESIGNER AND DRAFTSMAN—Vet., 26, 8 yrs. experience. Flare for creativity with ability to project ideas graphically. Aggressive. Wants pos. with industrial designer or firm, assisting with the development and styling of products or arch. interiors. Box E-184.

GRAD. LANDSCAPE ARCHITECT—Vet., 32, single. Interested in land planning or city planning. 4½ yrs. exper. Prefers Southeast location. Box E-185.

CIVIL ENGINEER—Discharged Naval officer, 30, Civil Engineer degree; 41 months Civil Engineer Corps including 31 months with Seabees and 10 months Naval Contract Coordination. Prior to war with U.S. Engineer Dept. and U.S. Geological Survey. Prefers position Southern Calif. Box E-186.

ARCHITECT—On term, leave from Navy. Reg. N.Y. and NCARB. Age 33, married. 10 yrs. exper. residential pos. with progressive firm. Box E-148.

REAL ESTATE MANAGEMENT EXEC.—Exper. in operation of multiple-unit apartment buildings. Age 32. Certified Property Mgr. of the Inst. of Real Estate Management. Have Law Degree. Recent overseas service with 20th Air Force. Oppor. with estab. firm considered ahead of immediate salary. Southern Calif. preferred. Box E-187.

LANDSCAPE ARCH.—27, B.S. degree, grad. Penn State School of Landscape Arch. 2½ yrs. experience with a city planning consultant firm. Box E-188.

MANUFACTURER'S AGENT—Ex-Army officer, 28, married, anxious to contact firm planning to manufacture prefabricated houses on a large scale. Am interested in selling angle, Henry J. Burmeister, 723 McAndrews Road, Medford, Ore.

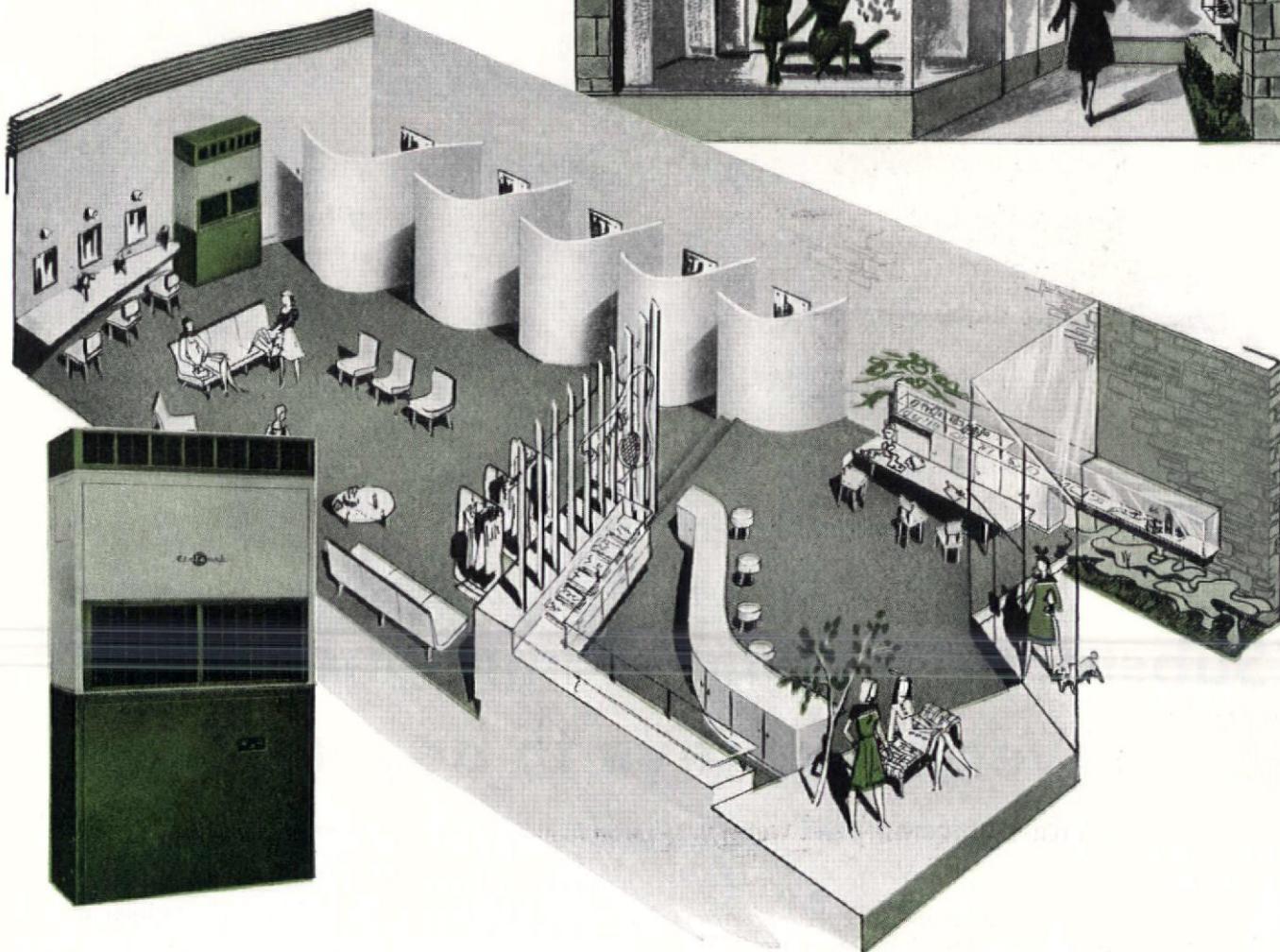
ARCH. ENGINEER—34, Navy Off., avail. about 1 Jan. 5 yrs. exper. arch. and struc. design and layout of munis. util. 2 yrs. field work. Desires to locate perm. in So. or West with engineer, architect or contractor. Box E-152.

CIV. ENGINEER—25, disch. Naval Off.; limited exp., but willing and intell; desires pos. as asst. to a bldg. contractor or arch. Esp. int. in housing proj. East preferred. Box E-153.

(Continued on page 154)

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Airtemp, are ideal in meeting the air conditioning requirements of all types of retail stores and shops. Flexible, quiet, trouble-free, easy to install singly or in multiple, Chrysler Airtemp "Packaged" Air Conditioners are noted for their low upkeep and operating cost. Steam coils may be added for heating to provide year 'round air conditioning. • Airtemp Division of Chrysler Corporation, Dayton 1, Ohio. In Canada, Therm-O-Rite Products, Ltd., Toronto, Ontario, Can.

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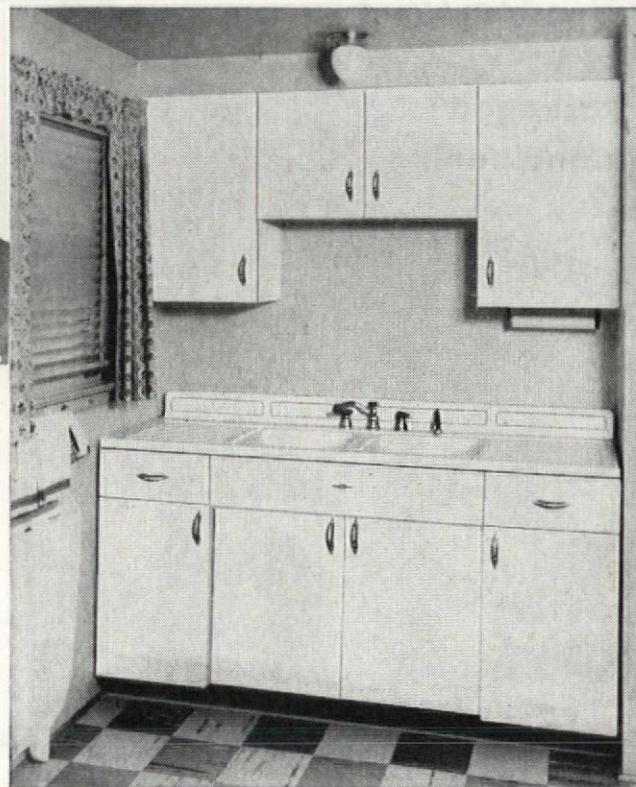
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## WHY PROMINENT BUILDERS USE YOUNGSTOWN KITCHENS

**WALTER S. JOHNSON**, President of Walter S. Johnson Building Company, Inc., Niagara Falls, New York, and a well-known member of the National Association of Home Builders, knows the advantages of Youngstown Kitchens.



Many fine small homes such as this have been built by Mr. Johnson's organization. The compact and convenient Youngstown Kitchen for this home is shown above.



## "Substantial saving in time and labor... Very attractive to buyers"

—WALTER S. JOHNSON, Pres., Walter S. Johnson Building Co., Inc., Niagara Falls, N. Y.

"WE HAVE been very well satisfied with Youngstown Kitchen equipment," Mr. Johnson writes. "We have found it easy to install and the finished kitchen is very attractive. There is a definite saving in time and labor, as your equipment is completely finished including enameling and hardware. There is no doubt Youngstown Kitchens help sell our homes."

"Your equipment helps us cooperate with the National Association of Home Builders in its efforts to raise the standards of home building. Without question there is a great opportunity for us all today to demonstrate that private industry can provide the right kind of housing, and *all* the housing, that this country needs."

We agree with Mr. Johnson that providing the best possible houses for all America is a job for private enter-

prise. We try to provide the kind of equipment that will keep progressive builders in that important task.

If you are not familiar with the Youngstown line, send for "The Builder's Kitchen," a booklet describing Youngstown Kitchen units, and giving detailed experiences of many builders with this modern equipment.

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**Porcelain Enameling Products—Design Engineering Service—Large Pressed Metal Parts**

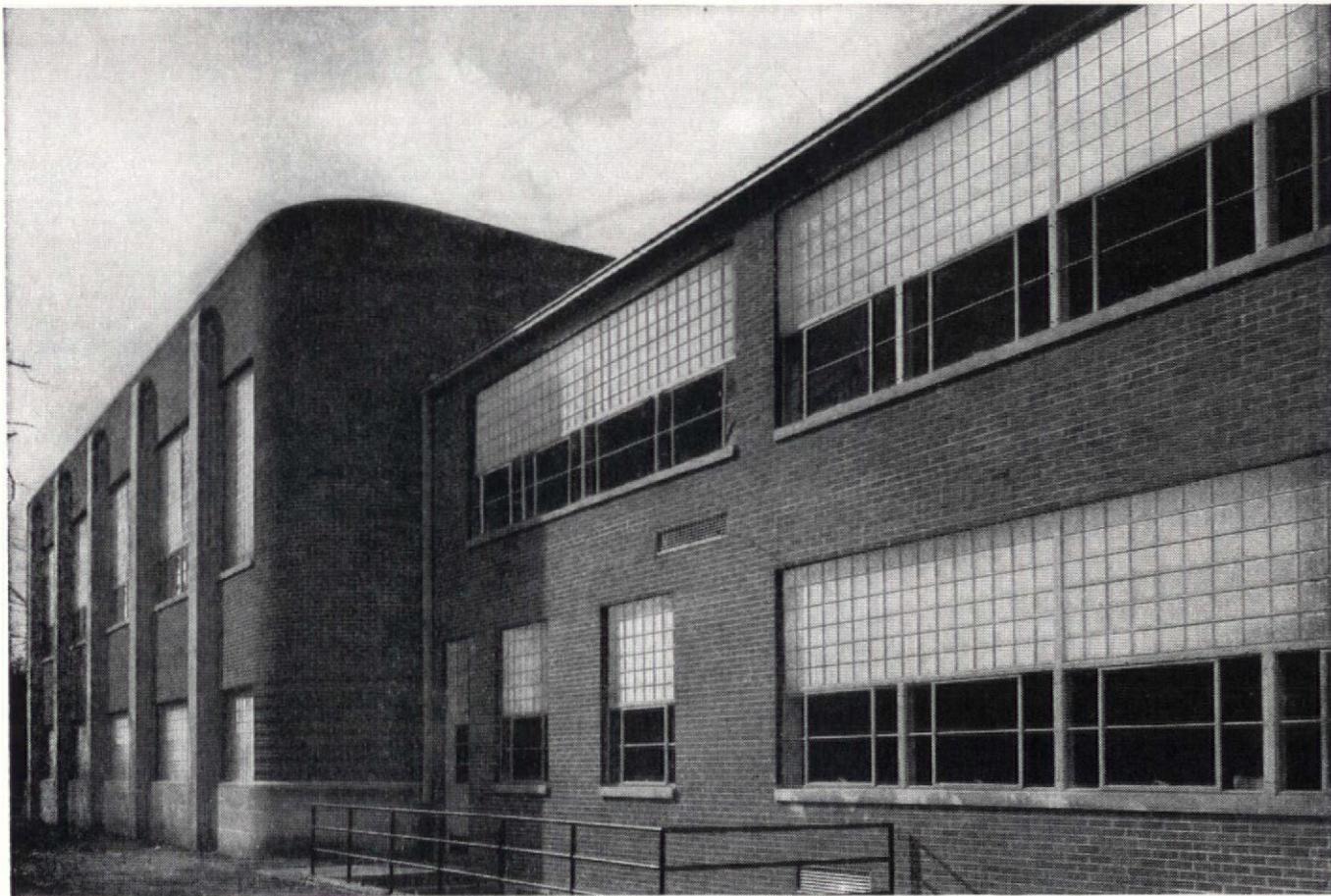
DON'T MISS IT!

**National Association of Home Builders  
ANNUAL CONVENTION—EXPOSITION**

FEBRUARY 25-28, 1946—Stevens Hotel, Chicago



*Youngstown Kitchens*  
BY MULLINS



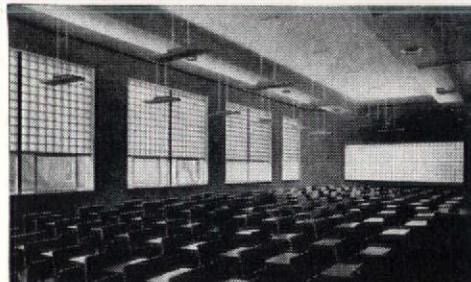
New Wauseon High School, Wauseon, Ohio, Architects—Britsch & Munger, Toledo, Ohio.

ALL WORKING SURFACES  
*FLOODED WITH DAYLIGHT!*

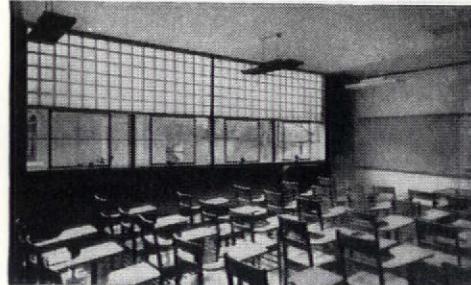
ARCHITECTS have found a way to eliminate troublesome glare and to flood schoolrooms with softly-diffused *natural daylight*.

This has been accomplished through the use of windows and the new Insulux Light-Directional Block. As shown by the photographs on this page, clear glass is used from sill-height to somewhat above eye level. This provides a narrow vision panel. Above that point—the new Insulux

prismatic glass block is used. As a result, the main beam of light is bent upward to the ceiling and is reflected deep into the interior of the classroom. There is a substantial improvement in illumination. Investigate! Panels of Insulux are now being used in schools throughout America to *daylight* classrooms, lecture halls, laboratories, gymnasiums, libraries, swimming pools, corridors and entrance ways.



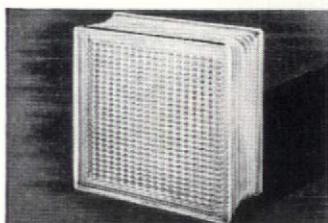
This large classroom is flooded with daylight. There is light for all—without objectionable glare!



This study hall is daylit with a combination panel of windows and the new Insulux Light-Directional Block.

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GLASS BLOCK

For technical data, specifications, and installation details, see our section in Sweet's Architectural Catalog, or write: Insulux Products Division, Dept. C-13, Owens-Illinois Glass Company, Toledo 1, Ohio.



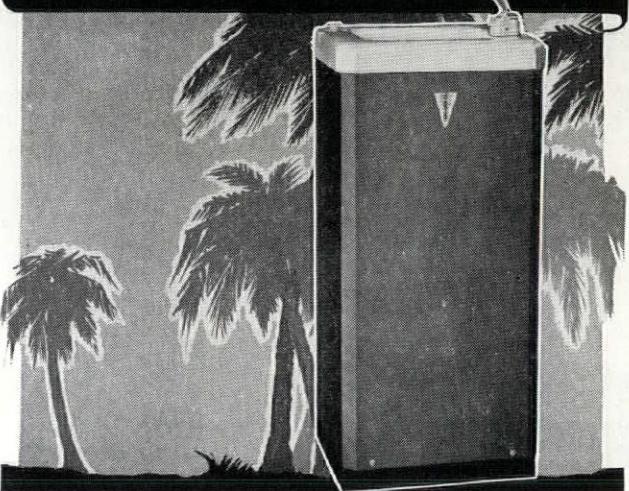
*Insulux Glass Block is a functional building material—not merely a decoration. It is designed to do certain things that other building materials cannot do. Investigate!*

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The spotlight is on OASIS for drinking water satisfaction and efficient, low-cost operation. Check these important features — space-saving compactness . . . rugged construction . . . trim beauty . . .

sanitary splash-free bubbler . . . super-capacity condenser unit, many others. The OASIS Electric Water Cooler, built by EBCO, pioneers in the water cooler industry for over 20 years.

**"It's an OASIS!"**



The EBCO MFG. CO. 401 W. TOWN ST.  
COLUMBUS 8, OHIO

## MEN WANTED

MEN—on good residential working drawings and detailing. Write full qualifications. Roland E. Coate, arch., 1111 Architects Bldg., Los Angeles, Calif.

ARCH. DESIGNER—To work in Chi. Exper. in design and constr. required. Sal. proportionate. Interesting diversity of problems to the proper man. Shaw Naess and Murphy, 80 E. Jackson Blvd., Chicago, Ill.

DESIGNER—Cap. of rendering persp. colored sketches for the redecor. of churches and pub. auditoriums, etc., must have complete knowl. of Catholic art and decor. designs. Pref. given combination man who can also take measurements, prepare est., close sales and super. Reliable firm, med. size Ill. city, low living cost. Contracts in various states. Advise exper., starting sal., relig., snapshot, phone, refs. Box R-178.

ESTIMATOR-DRAFTSMAN & GENERAL FOREMAN—wanted by newly org. constr. firm in W. Fla. Must be thoroughly famil. with masonry bldg. constr. and gen. concrete work. Age, detail educ. and exper. record, min. sal. acceptable, date avail. and refs. Box R-179.

DESIGNER—If you know store design and want to locate yourself with firm that is going places and that will reach the top pos. in the next 5 yrs., drop us a line. We need you and you need us. Box R-180.

ARCH. & DESIGNER—with 1965 ideas for So. Texas devel. company. Good drawing account and interest in firm for right man. Box R-181.

BLDG. SUPERINTENDENT—Some arch. eng., estim., quantity survey, indus. and res. constr. exper. Write with confidence, stating full qual., exper. and sal. desired. Excel. oppor. for right man. Box R-182.

ARCH. OR DRAFTSMAN—Exper. in reinforced concrete, mod. des. Either to open an off. on partnership basis or on a sal. or fee basis. N.Y. area. Box R-183.

EXPER. DESIGNER-DELINEATOR-DRAFTSMAN—Wanted by arch. released from service re-estab. office in Houston, Tex. Job leading to association. Box R-184.

ARCHITECT—Grad. Preferably regis. Good oppor. for young man looking for perm. indus. connection. Phila. area. Box R-185.

ARCH. DRAFTSMEN—Wanted by N.Y. arch. with winter quarters along Gulf Coast of Fla. Would like to interview smart young men with basic knowl. of eng. and sound concern about indigen. arch. Good future. Box R-186.

ARCH. DESIGNER AND DRAFTSMAN—By small office on Fla. W. Coast. Fut. connection for right party. State full partic. and sal. expected. Box R-187.

EXPER. ARCH. DRAFTSMEN—Wanted by arch. firm in the South. Able to handle scale drawings, details, all types of public, institutional and commercial work. Please state trng., exper. and salary expected. Box R-190.

DRAFTSMAN-DESIGNER—Must have creative ability, excellent future with leading store fixture mfr. in the East, immediate empl., salary open, state qualifications. Hermsdorf Fixture Mfg. Co., Manchester, N. H.

ARCH. DRAFTSMAN—With practical exper. for high-grade schools and monumental bldgs. Perm. pos. Childs & Smith, Architects, 430 N. Michigan Ave., Chicago 11, Ill.

ARCH. & STRUC. DESIGNERS & DRAFTSMEN—Wanted by arch. firm in large Southern city. Must be well trained and with varied exper. Perm. pos. Box R-188.

DRAFTSMAN—Clever young man capable of doing perspectives and drawing plans for homes and apartments. Oppor. to become jr. assoc. or partner. southeast Florida. Box R-189.

ARCH. DESIGNER, DRAFTSMAN—Clever delineator, mod. res. work pred. Opp. for adv. in small Denver, Colo. office. Box R-191.

EXPER. ARCH. DRAFTSMAN—To assume full responsibility develop complete working drawings for res. and small comm. bldgs. Submit qualifications, exper. and sample. Southwest lumber company. Box R-192.

ARCHITECTURAL DRAFTSMAN—Wanted by progressive Westchester arch. office. Experienced. State background and references. Box R-193.

EXPERIENCED ARCHITECTURAL DRAFTSMAN—Wanted for architect's office located in Mid-south doing commercial and residential work. Must be capable of handling complete project from sketch to finish working drawing. Write giving experience, age, salary expected and references. Box R-194.

ENGINEERING DRAFTSMEN—For work in Washington, D. C. government agencies. Starting salaries range from \$1,704 to \$2,980 yearly. Positions offered covering the fields of aeronautics, architecture, civil engineering, electrical engineering, lithography, mech. engineering, shipping, statistics, struc. design, topography and general. Applicants need minimum of 6 months appropriate drafting exper. No written test required. Application forms and examination announcement No. 406 obtainable at any first or second class PO or write U. S. Civil Service Commission, Washington 25, D. C.

DESIGNER-RENDERER—Modern residential and commercial work. Nationally known suburban office. Write or phone L. Morgan Yost, Architect, Kenilworth, Ill.

DRAFTSMAN-DESIGNER—For permanent position in Morristown, N. J. Residential work. Excellent future. Box R-195.

ARCHITECT—Young, with design ability and experience with working drawings and details. Good salary with future possibility of becoming partner in firm. Box R-196.

ARCH. DRAFTSMAN—With design ability and experience on working drawings and details. Good salary and bonus commensurate with ability. Box R-197.

ARCH. DRAFTSMAN—Some knowledge design; work in North and South America; homes, clubhouses, office buildings. Advise experience and financial renumeration. Clifford C. Wendehack, 101 Park Ave., N. Y., N. Y.

ASST. SPEC. WRITER—needed by Pa. arch. firm. Should have suff. bldg. constr. exper. to form backgr. for trng. as spec. writer. Box R-174.

ARCH. DRAFTSMEN—2 men wanted by well-known arch. firm in Chicago. One with design ability and one experienced on working drawings & details. Good salary and bonus commensurate with ability. Box R-175.

SQUAD LEADERS & SR. ARCH. DRAFTSMEN—Needed immmed. b. arch. firm in Pa. Box R-173.

TECHNOLOGY LAB. INSTRUCTOR AND AIR CONDITIONING INSTR.—Needed by N. J. tech. high school. Box R-176.

ARCH. ENTERPRISER—Gen. business and community service over 50 mi. radius—fee basis. Creameries, quick freeze plants, small factories, stores, residences, hosp., churches, off. bldgs. in towns 2,500-12,000 pop. Local bus. men will assist well-trained arch. to est. his own firm. Corres. invited. Box R-177.

BUSINESS MGR.—An exce. opening for right man as bus. mgr. for the Sheet Metal Ind. (Assoc Work) in the Milwaukee area. Fut. poss. State educ. quals., bus. exper., and age in reply Milwaukee Sheet Metal Contractors Assn., Room 108, 225 E. Michigan Street, Milwaukee 2, Wis.

ARCH. DRAFTSMEN OR ARCHITECTS—Familiar with arch. detail and design wanted by N.Y.C. constr. firm Box R-161.

ARCH. DRAFTSMAN—For industrial bldg. work. Some opportunity for job supervision. Submit sample of work P.O. Box 895, Lafayette, La.

ARCH. DESIGNER, DRAFTSMAN—To assume responsibilities and develop creative work. Perm. employ. opp. for adv. in prog. office with large vol. of public and private work. Submit quals., exper., samples. David H. Horn, Arch. Rowell Bldg. Fresno, Calif.

YOUNG MEN—With arch. training to prepare small house plans and specs wanted by large Midwestern line-yard lumber company. Opp. for adv. Box R-162.

DESIGNERS & DRAFTSMEN—Minn. firm wants Sr. and Jr. draftsmen for school, church, hospital work. State age, educ. and exper. Salary open. Perm. with future connection to qual. man. Box R-164.

ARCHITECT—For full-time position at Candlewood Shores on Lake Candlewood, Danbury, Conn. Good salary to start; unlimited possibilities for advancement. Box R-165.

ARCH. ENGINEER—Wanted by architect's office in South that is enlarging its practice. Position leading to early associateship and share of profits. Give salary and full particulars. Box R-157.

ARCHITECT OR ARCH. DRAFTSMAN—With arch. degree, needed for work on general practice, specializing in prefabricated houses. Perm. connection with oppor. for adv. Salary depends on ability & exper. Box R-168.

DRAFTSMAN—Wanted by an indus. designer in N. Y. Exper. in dept. store layout and fixture design. Box R-169.

STORE PLANNERS—Draftsman for planning and designing store interiors. Must be familiar with store fixture work for designer's office located in N.Y. State age, exper. and sal. required. Box R-159.

ARCH. DRAFTSMAN—Designing; rendering; or working drawings. Small but growing office. Large prospects ahead in wide variety of bldg. types. Excel. opportunity on Puget Sound, Wash. Box R-160.

BUILDING ESTIMATOR AND APPRAISER—Wanted by appraisal firm. Preferably one with engineering trng. (not essential). Perm. postwar connections. Good references as to qualifications and character required. Apply P.O. Box 868, New Haven, Conn.



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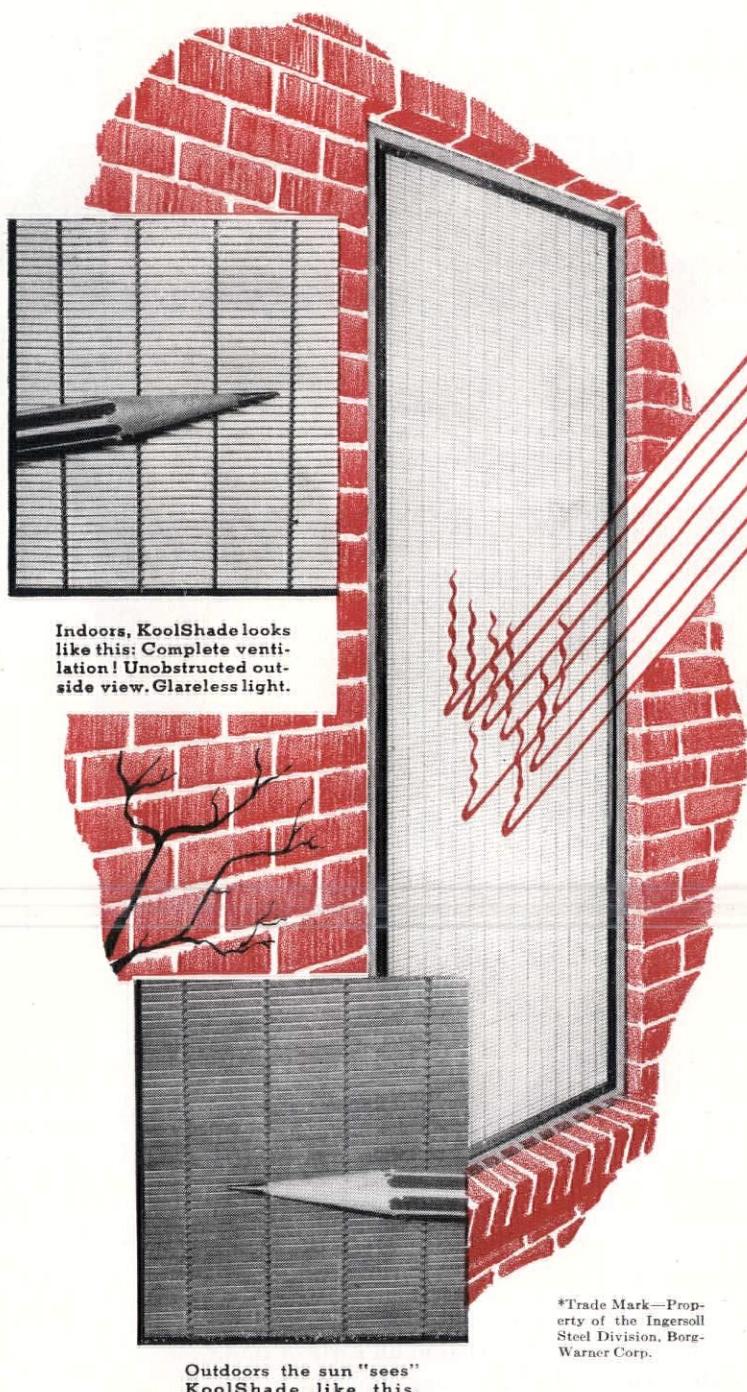
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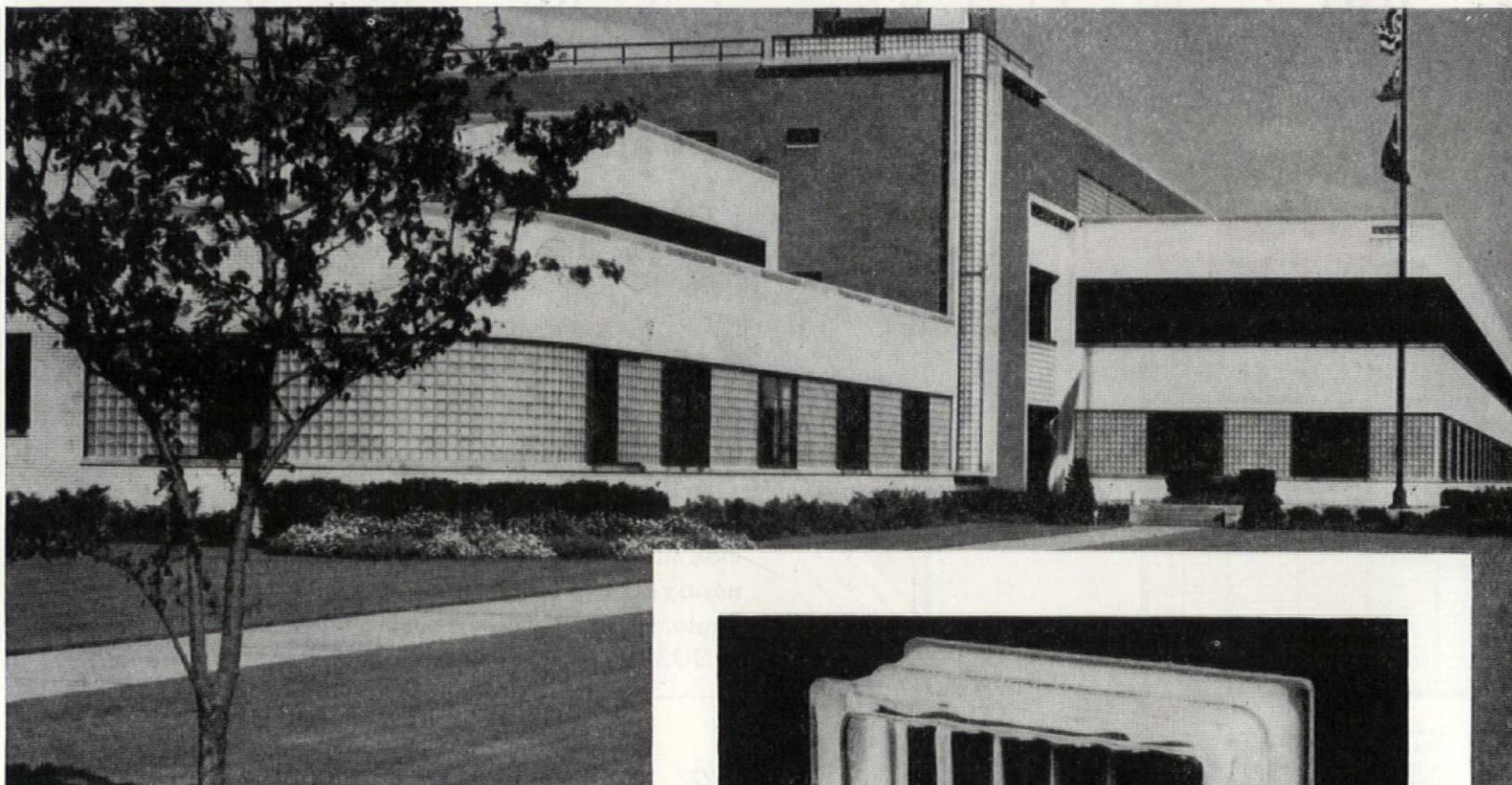
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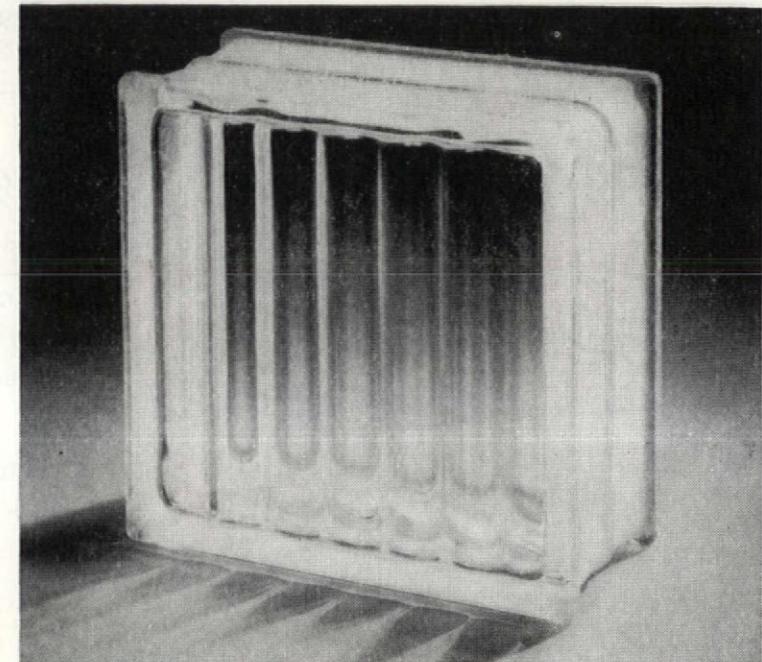
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# WHAT THE WORLD IS COMING TO...



## More and more glass block panels

- in houses and factories
- in office buildings and stores
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**L**IIGHT—where you need it most. Protection—against dust infiltration and heat losses. Savings—in operating and maintenance costs. Those are three important reasons why PC Glass Blocks are in increasing demand for new construction and modernizing projects.

PC Glass Blocks transmit a generous supply of diffused natural light over wide areas, increasing usable floor space, reducing artificial lighting costs.

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To assure piping that would provide permanent protection in this unusual

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installation, the architect and engineers unhesitatingly specified the brass pipe be joined with Silbraz\* joints. These threadless joints are strong . . . leak-proof . . . corrosion resistant . . . vibration proof. They actually become part of the pipe itself — make it literally into a "one-piece pipe line."

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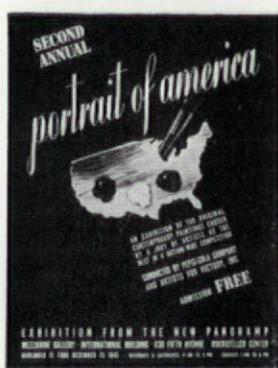


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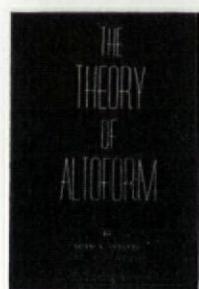
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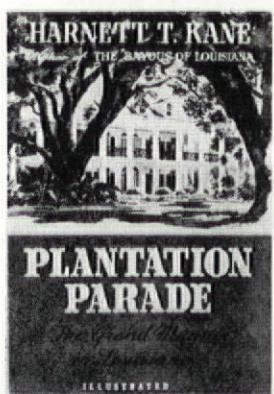
# REVIEWS



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## EXHIBITIONS

A major annual event on the national socio-cultural scene has just been re-enacted for the second time: the Pepsi-Cola Co.'s great painting competition, *Portrait of America*. The competing canvases are now on exhibition at Rockefeller Center in New York. While there will always remain dilettantes who decry the gruesome fate of commercially patronized art, the scope and purpose of this competition and the policy of its sponsors deserve handsome recognition. It provides an opening for many artists who lack the means of bringing their work before the public, often because of the region in which they live; it offers the public as representative a cross section of American painting as has ever been gathered. From the canvases shown and prizes awarded it is obvious that the judges have gone out of their way to avoid favoritism toward any one school or technique, though by their very care they tend to under-emphasize trends in order to provide variety.

The competition is novelly staged—a bit too much so, in fact. While half the canvases are conventionally hung, the remainder are shown lying slightly propped up at floor level. Visitors circulate on ramps which, unfortunately, are bordered by sturdy plywood partitions at least 30 in. high. In order to see the lower series of canvases the visitor must peer over this railing, combat inferior lighting and completely ignore any urge to step back for a better view since, if he does, the picture disappears from view. Paintings are grouped by subject matter—portraits, landscapes, city scenes, sports, etc., making it easy to tabulate, for instance, the small percentage of abstract work. The available wall space contains such a wealth of material that the initial effect is staggering. Disregarding these small flaws in staging, the over-all value and importance of the competition cannot be overestimated, particularly since no comparable art event exists today.

A first peep at what may be expected in furniture was recently provided by Artek Pascoe, who are now exhibiting a new line at their redecorated New York showroom. It was a little surprising to find how little they have digressed from the original Aalto designs, or rather, from their influence. Staff designers have developed a number of new pieces, mostly chests, tables and sectional, overstuffed seating. All feature the famous bentwood leg which, however, is no longer a solid piece but entirely composed of laminated veneer. Opposed to its small prewar, architectural trade. Artek Pascoe is now going into large scale production and will sell through department stores on a national basis, at slightly lower than prewar prices. As a consequence they have developed furniture groupings that can be sold as a unit or by individual pieces. The new designs are as trim and fresh as ever though in many cases the master's touch is lacking. It remains, however, one of the few really outstanding lines of modern furniture.

New products which most visitors anticipated finding in this year's exhibit of Useful Objects at New York's Museum of Modern Art were conspicuously absent. There were of course a number of Army castoffs such as lighters and small transparent sewing kits but the usual ceramic bowls, wooden salad forks, etc., were much more plentiful. As in former shows, plastics dominated everything in a fiesta of shoe trees, shoe horns, corn cob holders, garden hoses, pillows, raincoats, tableware, cheese knives and coat hangers. Differently hanging in one corner of the room were perhaps the most interesting (and best-designed) objects on display. These were indoor and outdoor thermometers operating on an expanding

metal spring instead of mercury with speedometer-like needles registering on round, boldly numbered faces. It is unfortunate that tomorrow's wonder materials could not make this year's pre-Christmas market, but with the discernment shown in the present selection, the 1946 show should be something worthy of wildest expectations.

## BOOKS

**PLANTATION PARADE: The Grand Manner in Louisiana**  
By Harnett T. Kane. Morrow, New York, 342 pp. Illustrate 6 in. by 8 1/4 in. \$3.50.

After the abrupt and final collapse of plantation culture brought about by the Civil War, its one concrete legacy, the decaying seigniorial architecture that dots the bayous along the Mississippi, was relegated to as dark an oblivion as its sumptuous social pattern and opulent economy. Though legend may have kept the era alive in the valley, to the rest of the nation its obituary was long ago written, filed and forgotten. In more recent years, as our national heritage and consciousness matured, scores of books on regional history have appeared with unremitting regularity. Few, however, have dealt with the lower Mississippi valley.

As a native of Louisiana and the author of several other books on the Deep South, Mr. Kane should be well fitted for the task he undertakes in *Plantation Parade*—a biography of Louisiana's great plantations. He writes about them intimately and individually putting considerable emphasis on architecture. Unfortunately, the over-all picture is too fragmentary and dewy-eyed to give the reader a justification for the particular social, economic and artistic phenomena of the era.

From an architectural viewpoint, the author is saturated with the charm of and, at times, lost in the ghostly shadows of the great galleries. The line he draws between the Greek Revival period and its predecessor, the Creole plantation house is all but indistinguishable. He underplays the fact that the latter had a definite and characteristic style of its own which stemmed from the French background of the Creole settlers and recalls the architecture of the French island possessions: two stories, usually with the main rooms on the second floor, steeply sloping roof and a gallery across the front of the house supported by slender wooden columns.

This broader architectural background of Mr. Kane's book is covered in less than two pages, and from then on practically abandoned in favor of an overwhelming enthusiasm for the Neo-classic of which, avowedly, there exist more examples. As the author says, "Some of the consequences have been criticized as slap-dash imitation without purpose, but in Louisiana the Neo-classic movement resulted in structures fitted admirably to the people's needs. In few other places did it produce such stately residences, places of dignity and fine proportion adapting ancient motifs with understanding and ingenuity." For one thing, only a feudal society like that of the planters could afford to erect or maintain houses of a size great enough to avoid dwarfing to absurdity the Classic facade.

Another point which Mr. Kane fails to make clearly is the total lack of popular architecture and constructive ability in the region and the abrupt cessation of plantation building. The answer is simple but not obvious to everyone who may pick up a copy of *Plantation Parade*. When the old economy failed so did the system of slave labor, and since no effort had been made to create skilled artisans among the serfs, plantation architecture vanished as well. (Continued on page 160)

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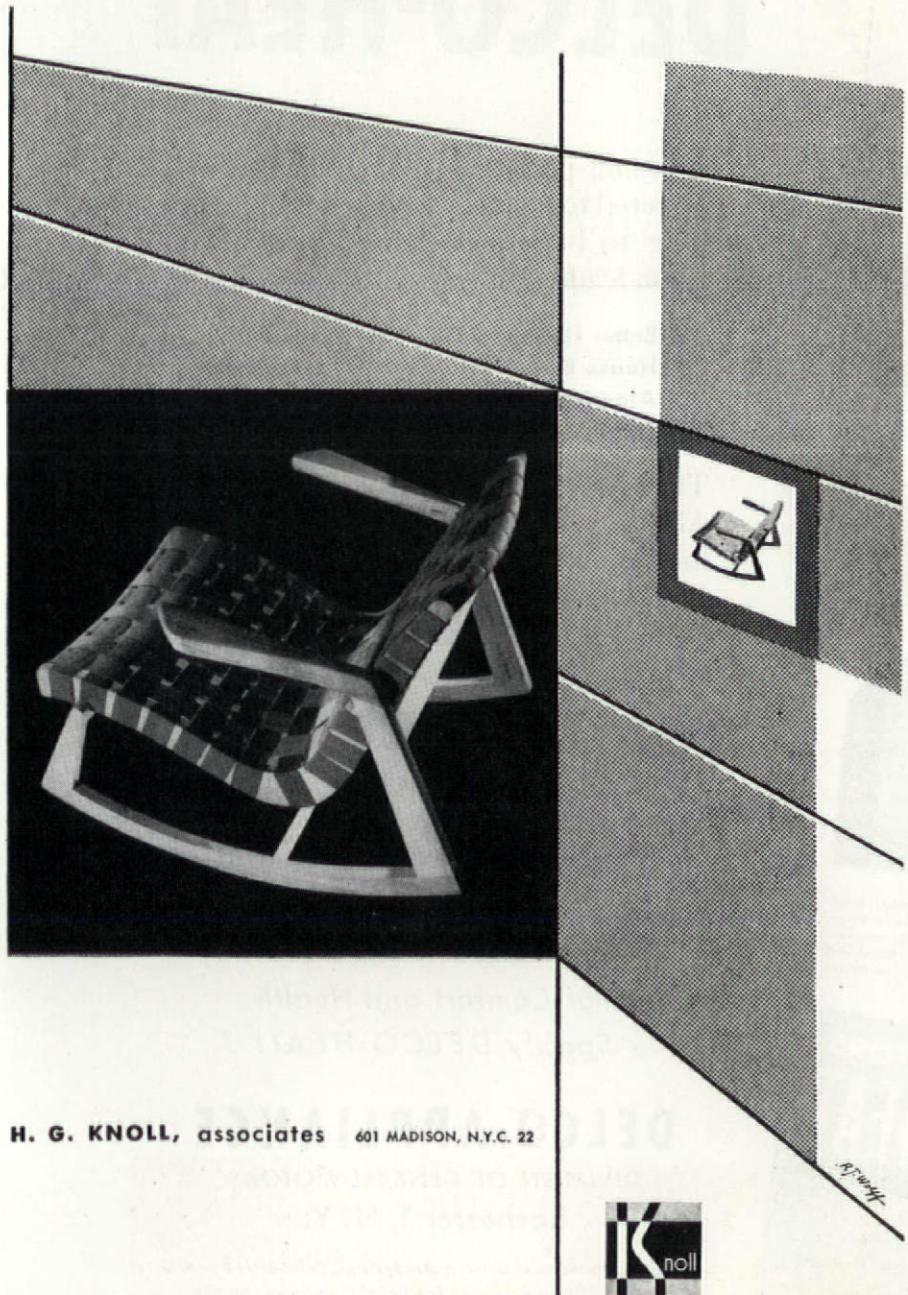
The lives of the lordly planters and their wives are glowingly recounted but with little significance or relation to the national picture. While the pages fairly drip with nostalgia the book lacks the delicacy and spontaneity of, for example, Percy's *Lanterns on the Levee*. As for its architectural aspects, a little of Talbot Hamlin's academic learning would do a lot of good.

**TUBERCULOSIS HOSPITAL.** American Trudeau Society, Medical Section, National Tuberculosis Association. 1790 Broadway, New York, New York. 10 pp. Illustrated. 14½ in. by 11¼ in. \$2.50.

Appearing at a time when plans for hundreds of hospitals are still in the design stage, this brochure on typical requirements for a tuberculosis sanatorium could not be more timely or welcome. Published under the direction of the American Trudeau Society's Committee on Sanatorium Planning and Construction and planned by architect J. B. Basil, the prototype hospital is a compactly planned six story building.

Background information on administration and medical procedure was gathered by questionnaire and by personal visits of the committee to recently completed hospitals representing

an integral part of the contemporary plan



H. G. KNOLL, associates 601 MADISON, N.Y.C. 22

the most advanced concept of tuberculosis treatment. Since 1884 when the first sanatorium was built at Saranac Lake the medical attitude toward the treatment of the disease has radically changed. Structural emphasis has shifted from a system of scattered groups of low dwellings to the centralized institution of today, and though many architects will consider themselves familiar with the requirements of sanatoria, it is safe to say that the agglomerate opinions gathered by questionnaire will hold some surprises. For example, Mr. Basil discovered that a majority of administrators recommended that 50 per cent of the total bed capacity be composed of single rooms with the remainder divided between two and four bed wards. This, he believes, indicates that the old idea of large wards and liberal porch space has given way to predominate infirmary type rooms. Another surprising outcome was that hospital staff members with years of experience in the use of porches object to the absence of visual control and the resulting disciplinary problems while the patient is on the porch. Furthermore, the majority finds that overhanging porches blanket the light in the rooms underneath and that in the more northern climates use of porches is limited. Considering these opinions, Dr. Basil and the committee came to the conclusion that the large initial investment involved in the construction of porches is unwarranted. His plan places patients' quarters at the front of the building, facing south with medical and service facilities to the north.

While it must be borne in mind that this sanatorium is a hypothetical one intended as a basis and guide for further development and variation, it cannot be claimed the design is an imaginative one. It must also be remembered that tuberculosis is, at best, a tedious and discouraging disease and that consequently the psychological effect of the physical environment on the patient is of the greatest importance. Consequently, it is the duty of the hospital designer to provide a cheerful and open a setting as possible. One example that inevitably comes to mind in this connection is the handsome Lake County Sanatorium designed by William A. Ganster and W. L. Pereira (FORUM Sept '40) which departs as far as possible from the grim institutional atmosphere—seems instead merely a very pleasant place to rest. Surprisingly, the two plans bear a close similarity. Their difference lies in the architectural treatment. As a source of reference however, this book fulfills its purpose and should be read by anyone intending to design either a hospital or a sanatorium, though an idea that it is a shortcut to the analysis of the problem at hand should be immediately quashed.

**THE THEORY OF ALTOFORM.** By Adam A. Sanders. The Society for Advanced Thought and Art, Brooklyn, N.Y. 61 pp. Illustrated. 6 in. by 9 in. \$1.

To begin with, *The Theory of Altoform* has nothing whatever to do with the Finnish architect or contemporary furniture. It is an attempted justification for the survival of certain people of the world in the face of great odds while mightier ones disappear—a justification which leans heavily on metaphysical laws and artistic expression.

Many a fancypants theory slips unmolested past the public eye for the simple reason that few people have the time or erudition to repudiate it. To take Mr. Sanders to task would require a prodigious knowledge of ancient history, ethnology, religions, political science and art. Then too, cosmic laws are pretty tricky things to authenticate, even with the best legal advice. So, until he is seized up by a more learned reviewer the author and his theory will be accepted at face value.

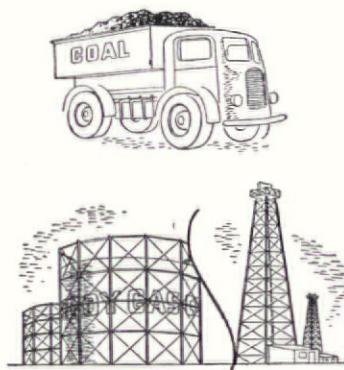
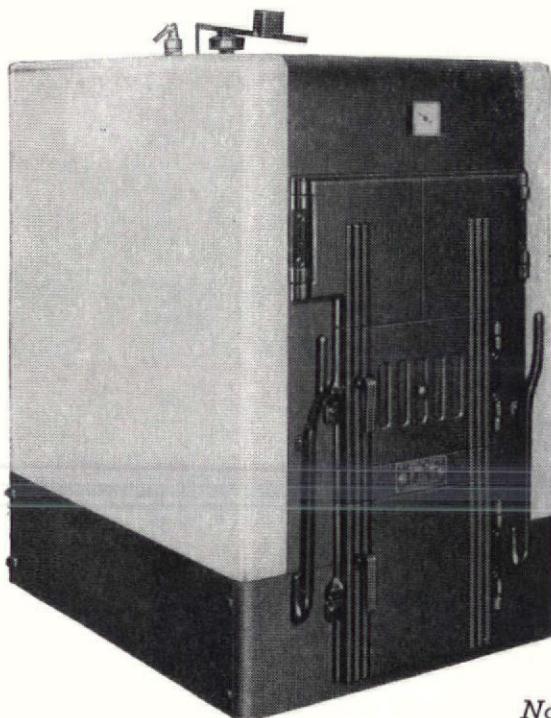
Mr. Sanders claims that neither a social, political, religious nor moral basis can conclusively explain the survival of certain nations through the ages since all are based on assumption and none is universally applicable. Spurning conventional experience and mere knowledge, Mr. Sanders clasps the torch of Altoform, a nebulous law which mysteriously divides the human race into two opposing

(Continued on page 164)



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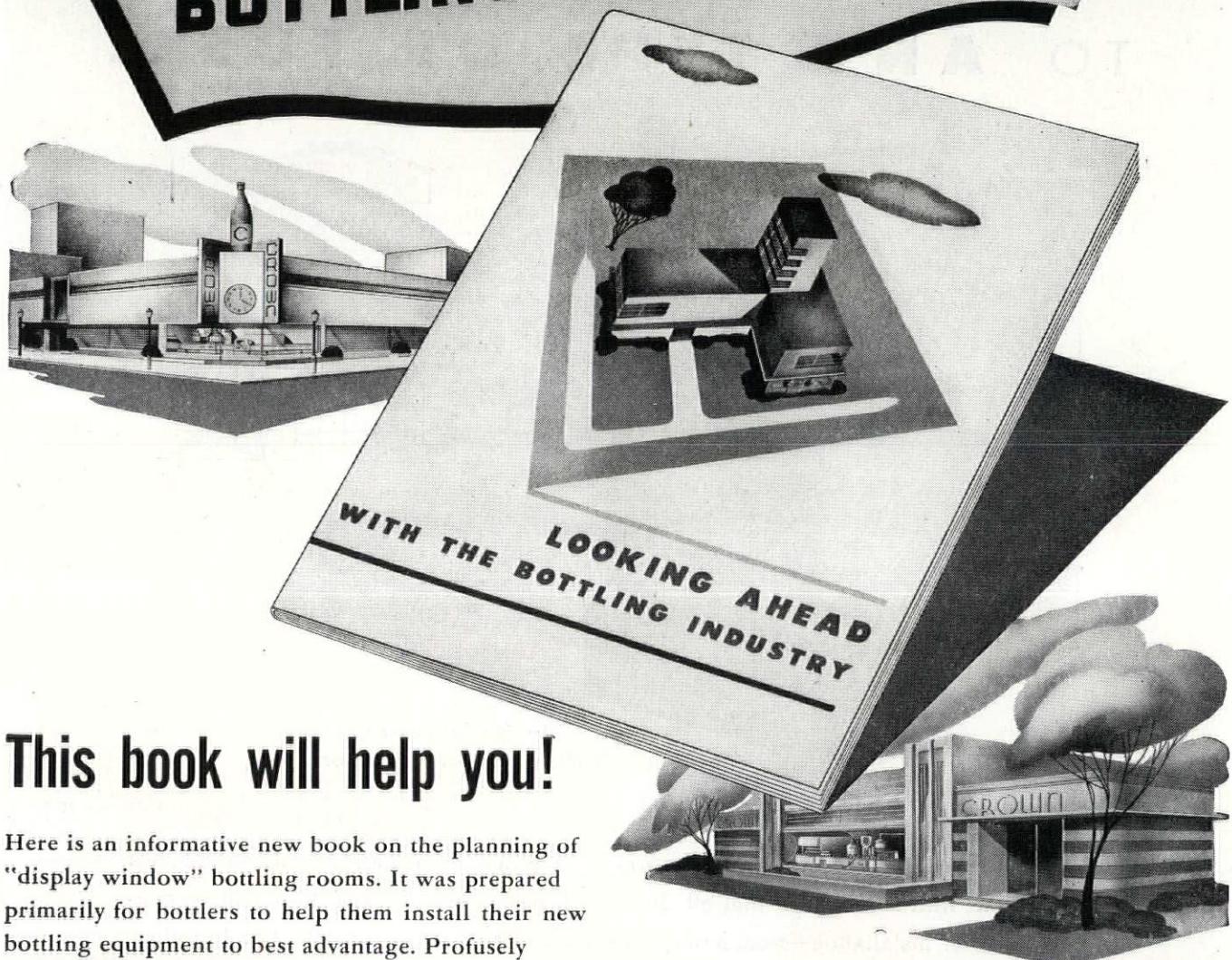
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groups: the vertically minded, or constructive, peoples, and the horizontally minded, or destructive, peoples. These inherent qualities, trademarks of a cosmic law, manifest themselves in collective bodies as well as individuals. The vertical force is most easily identified in various civilizations by their use of the architectural column. As substantiation the author points to the columnar structures of Egypt, Greece, Persia, Syria, Ethiopia, India, China, the Hebrews and the Armenians who, though at times harassed, are still holding their own with or without land. He opposes their architecture to the low, massive buildings erected by such mighty begone powers as the Chaldeans, Phoenicians, Nubian, Assyrians, Hittites, Babylonians, Mayans and Aztecs. It is also undeniable that during various epochs many of the former were subjected to the direct domination and influence of the latter.

Be all this as it may, Mr. Sanders' real message to the twentieth century is the constructive and hopeful force expressed in the American skyscraper, one whose survival must be ensured by the budding geniuses of peacetime civilization. He would have all modern artists heed, absorb and remain conscious of the power of the vertical line. What self-

conscious monstrosities might result from Mr. Sande advice gives plenty of food for thought but nevertheless, cannot resist harking back to the first truly American colum the totem pole, as a true yardstick for this work.

#### HOUSING AFTER WORLD WAR I: Will History Repeat Itself?

The National Housing Agency. 44 pp.

With all parties in the current controversy about the house building outlook pointing anxiously—and in different directions—to post World War I experience to prove something other, this comprehensive examination of what happened timely. One of a series of NHA studies of major issues in the housing transition from war to peace, the bulletin is supplemented by a handy set of charts graphing the 1916-19 construction picture and related factors.

The bulletin is not, however, likely to provide much ammunition for those now arguing over whether federal price controls should be imposed on new housebuilding. The NHA staff responsible for its preparation (Coleman Woodbury, L. Grebler, Davey Lowery and Grace M. Keeffe) are careful to point out that no exact analogy can be made between present conditions and those that followed the last war. Among the important differences: 1) construction costs have advanced far less than in World War I; 2) price controls on building materials and services are now effective—all federal price controls blew up within a few days of the 1918 Armistice; 3) over the last two years construction stumbled almost to a stop—at the end of World War I it was operating in high gear; 4) in 1940 residential construction seemed to be mounting toward a boom—in 1914 it was in a downswing.

Juggle all these factors, and you probably will not come out with an answer any more conclusive than you have already to the big question: will building prices and building's market react the same way this time?

For building men with long memories NHA's account of the 1918 price uncertainty and building lag, followed by steep price rise and brief building boom will be a familiar one. By 1920 "billions of dollars worth of construction plans had been canceled and the building material prices were dropping sharply. Within a year, wholesale prices leveled off and building volume began to rise.

Whether building costs this time will have to go through substantial deflation before building can connect with its hungry market is a question that only the next few years can answer. The answer will in large part depend on whether the whole U. S. economy can be stabilized at a full-employment level and at present price levels—or whether a general deflationary downswing is ahead.

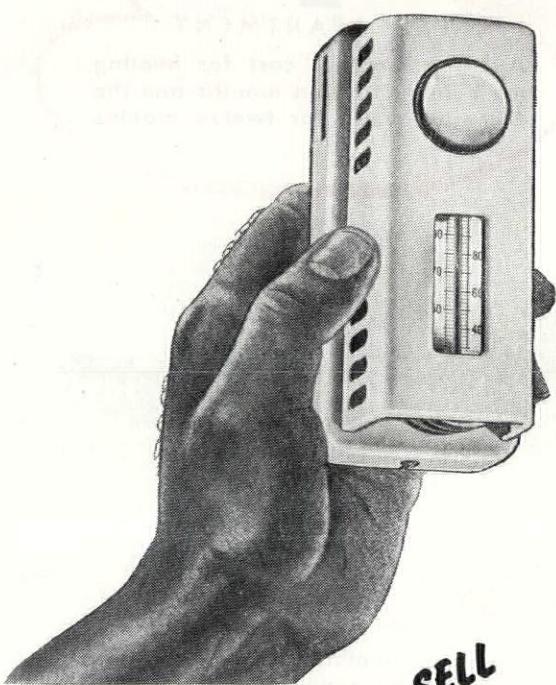
#### URBAN REDEVELOPMENT LEGISLATION IN THE U. S.

American Society of Planning Officials, Chicago, Ill. 7 pp. 8½ in by 11 in. \$2.

As a comparative analysis of what has been accomplished in the way of planning by American states and cities, this pamphlet gives adequate general information in chart form. It is however, merely a part of the comprehensive study of urban redevelopment now being prepared by A.S.P.O. Starting with the general provisions of the various state acts, it continues with a survey of responsible agencies and their powers, sources and disposition of funds, specially delegated powers and subsidies, and a breakdown of the extent of participation and control of private enterprise. Though definitely intended for use by professional planners, the relative progress and status of individual states should be of interest to anyone.

#### G.I. JOBS

Forum's free placement service for veterans, see pages 150, 154.

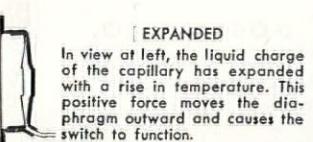
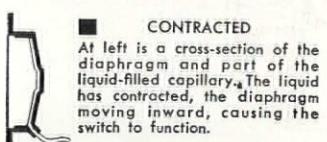


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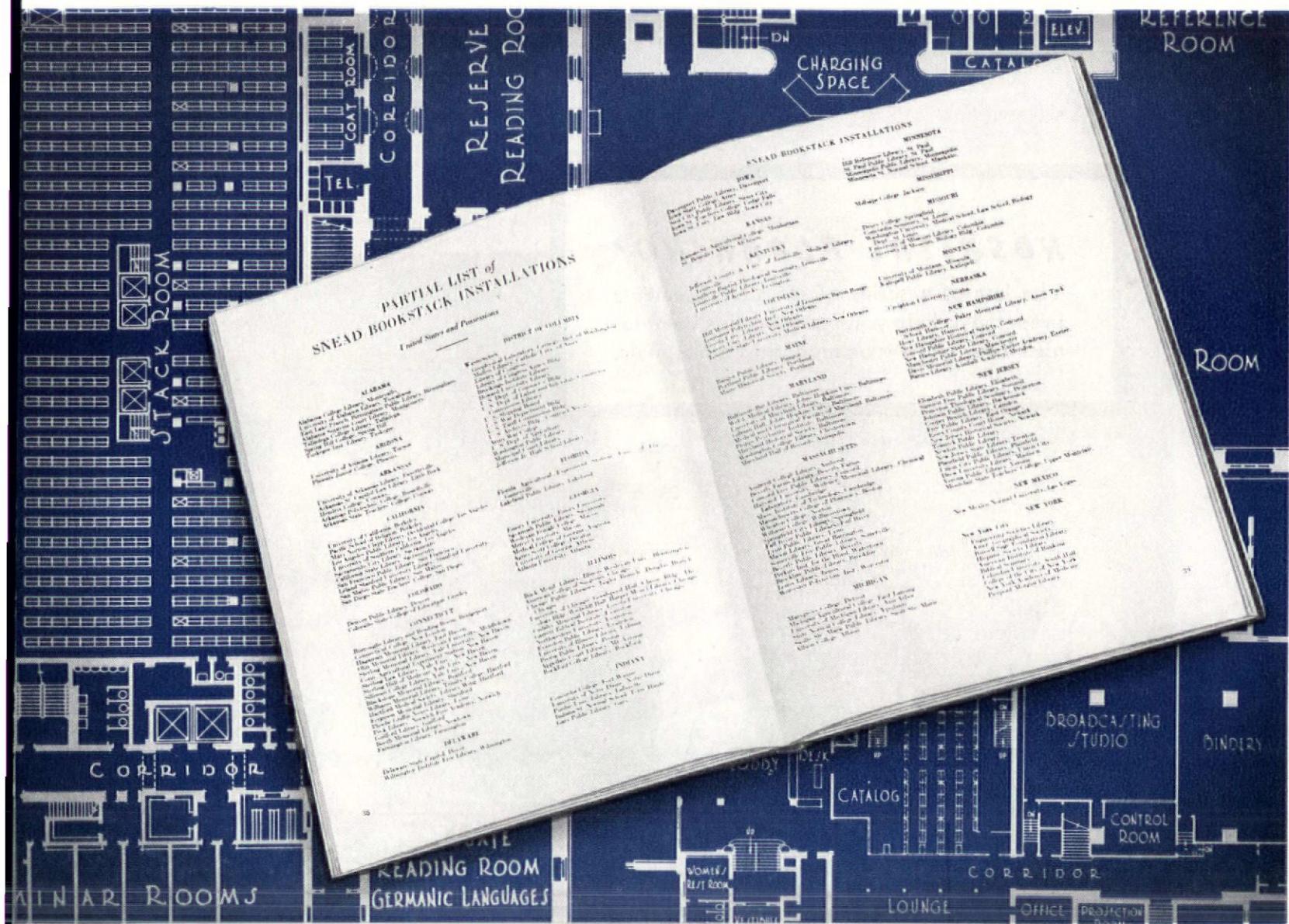
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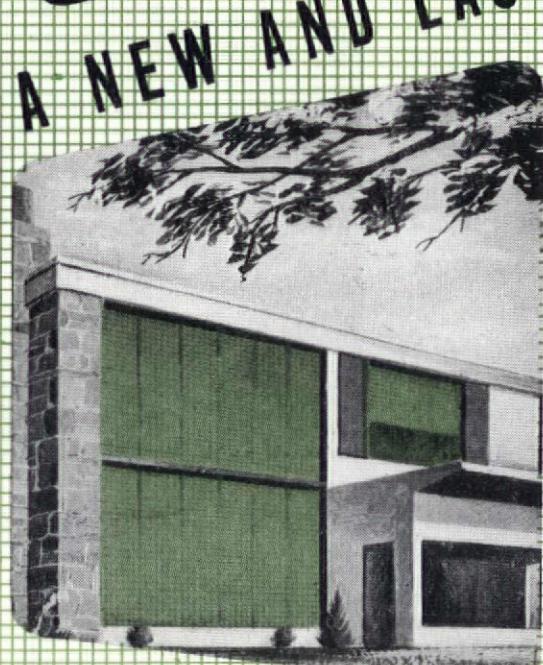
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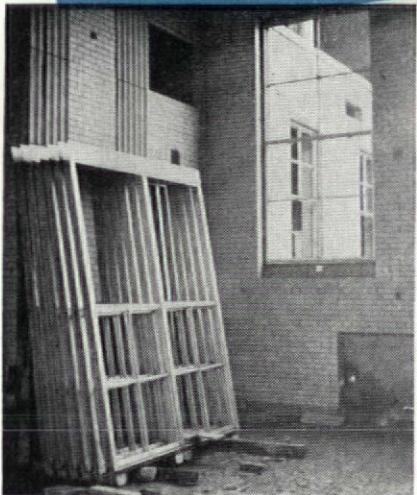
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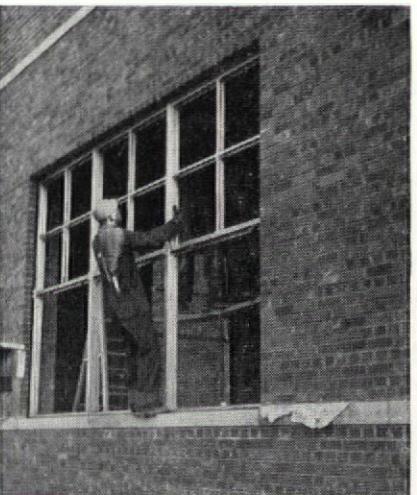


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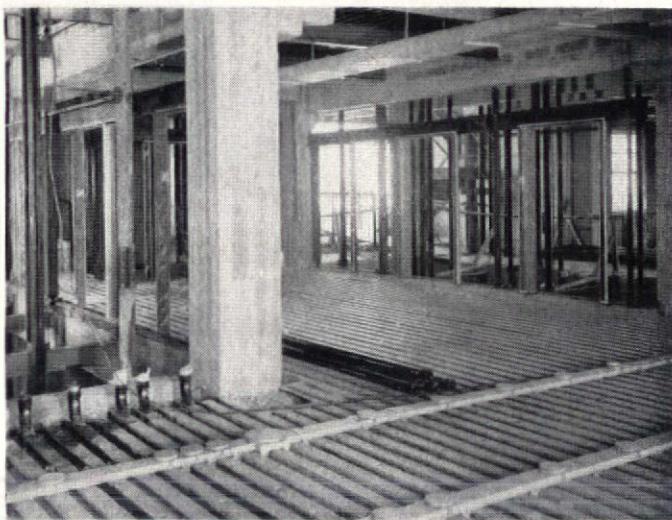
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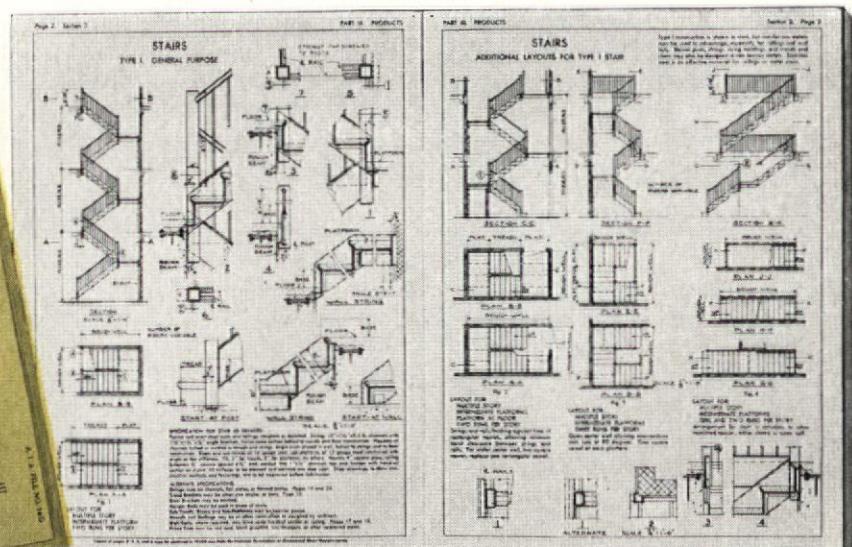
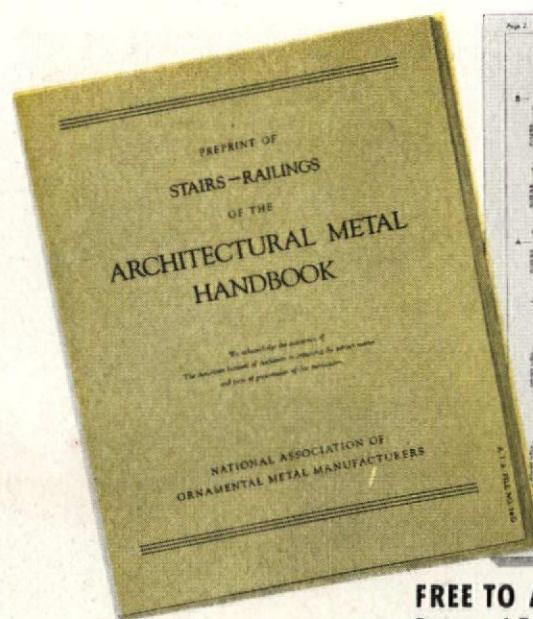


Above photograph is of a sales floor in a store with G-E Q-Floor Wiring. Note the many floor outlets in different parts of the room. Power is readily available for working models, etc.

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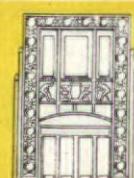
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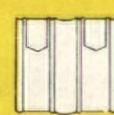
STAIRS



DECORATIVE GRILLES



ENTRANCE DOORWAY



SPANDRELS



DIRECTORY

# STAIRS

*give extra strength,  
add fire protection to any building!*

Extra strength . . . improved safety . . . increased fire protection . . . easier installation—these are but a few of the reasons why more and more architects are specifying steel stairs for all of their new buildings.

Steel stairs like other architectural metal work can be fabricated to conform to your own ideas of design. They can be made to fit any size space, any style of building. They can be used effectively in residential buildings as well as in commercial and industrial buildings.

As you design new buildings be sure to include steel stairs as well as other types of architectural metal work. For entrances, doors, windows, balustrades, grilles, and for hundreds of other types of interior and exterior decoration you'll find architectural metals offer the solution to many problems.

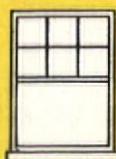
The manufacturers and fabricators of steel stairs and other types of architectural metal work are always anxious to serve you. Call them in for consultation now, while your plans are in the formative stage. Their helpful advice may be of real value to you.

A new 32-page Handbook on Metal Stairs and Railings containing hundreds of detail drawings has just been prepared. A free copy of this valuable new book will be mailed to architects upon request. Write on your business letterhead. Address Dept. F-1.



NATIONAL ASSOCIATION OF  
**ORNAMENTAL METAL**  
MANUFACTURERS

209 CEDAR AVENUE TAKOMA PARK WASHINGTON 12, D.C.



NON-FERROUS WINDOWS



FLAGPOLE BASE



STORE FRONTS AND MARQUEES



FIXTURES

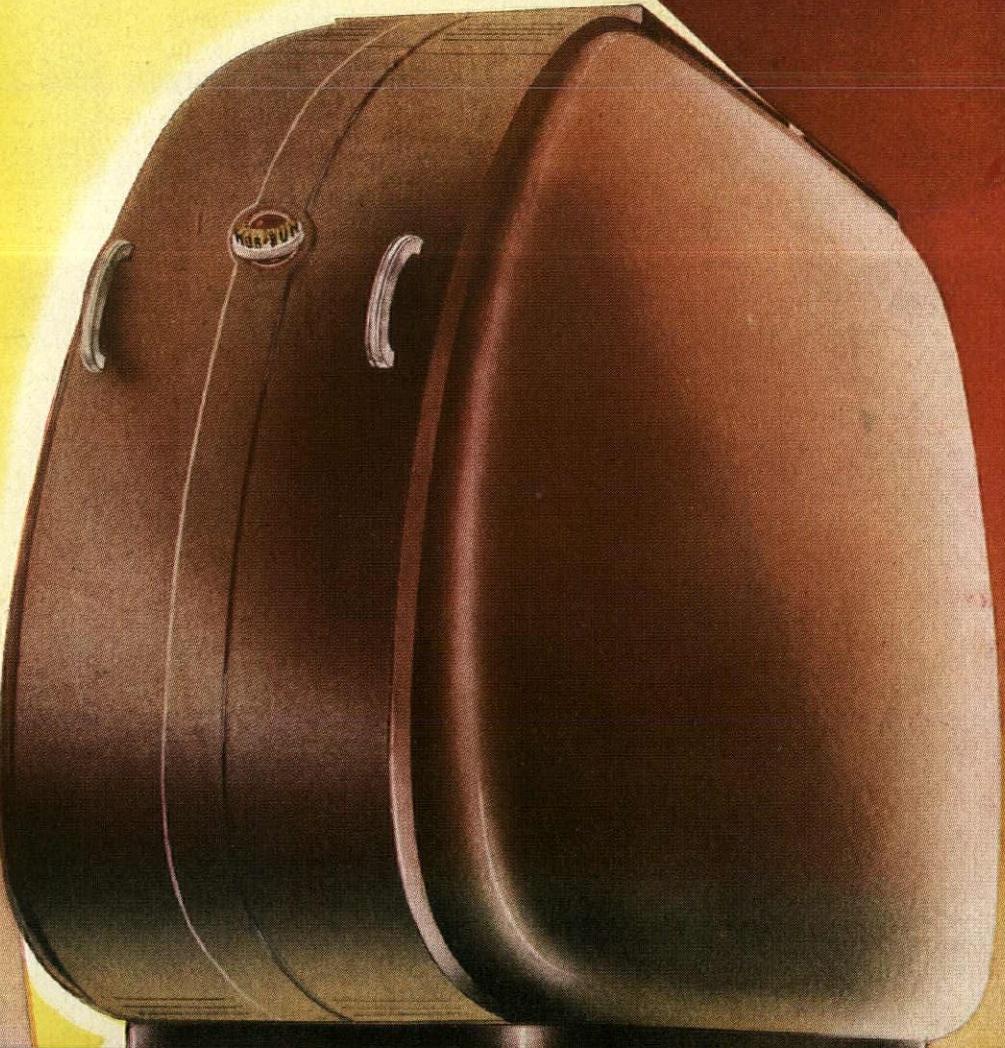


HAND RAILINGS

Announcing  
**MOR-SUN**



PRESSED STEEL  
FURNACES



Forced Warm Air  
For  
Modern Home Heating

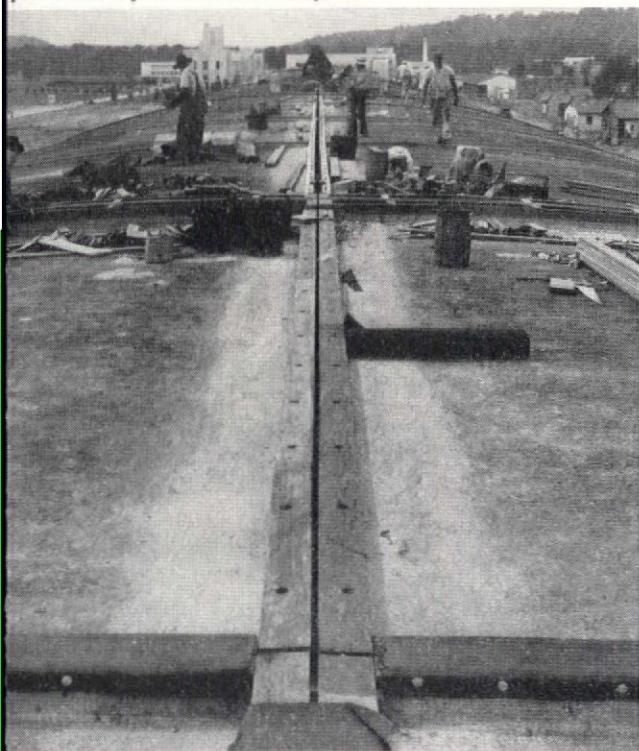
**MORRISON STEEL PRODUCTS, INC., BUFFALO 7, N.Y.**

# PRODUCTS AND PRACTICE

of insulation application . . . Corrosion-proof lining for steel pipe . . . New source of building boards . . . Low cost prefab . . . Steel framing method

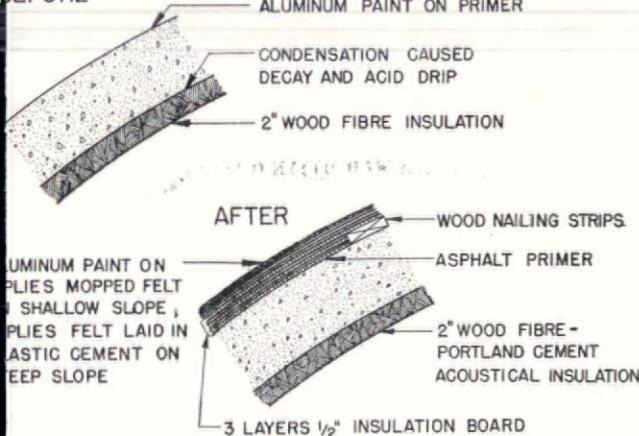
. Mechanical core . . . Kitchen ventilating system.

photos courtesy Johns-Manville Corp.



100 FT. EXTENSION to Navy's concrete barrel vault ready for application of exterior insulation: first comes asphalt primer.

BEFORE



HERMAL INSULATION switched to outside of concrete vault to avoid internal condensation.

hen the Navy decided recently to lengthen a testing basin at Carderock, Md., it decided likewise to correct a condensation problem which has plagued the original barrel-arched structure since its completion. The major difference in design of the 1,800 long extension compared with the original structure, is that the thermal insulation has been moved to the outer surface of the concrete shell and covered with built-up roofing. The original structure was lined with a 2 in. layer of wood fiber insulation while the outer concrete roof was given a bituminous coating and painted with aluminum. Although the build-

ing was ventilated, condensation decayed the wood, and produced a condensate drip which endangered the testing apparatus.

In the extension, a 2 in. layer of wood fiber insulating sound absorbing material still lines the underside, acting as a form at the time of pouring the arch. The outside of the concrete shell is surfaced with a composite membrane of eighteen elements assembled as follows: sprayed asphalt primer; mopped down layer of Johns-Manville felt; nailing strips; three mopped-down plies of  $\frac{1}{2}$  in. insulating board; four layers of felt and mopping or four layers of felt laid in plastic; aluminum paint.



NAILING STRIPS are laid parallel to building's length.



3 PLIES of insulating board are laid in asphalt mopping.



FELT is applied in mopping if slope is under 6 in. per ft.



FELT is set in plastic cement if slope is over 6 in. per ft.

## NICKEL LINING yields low-cost, corrosion-proof piping.

A new electro-plating process which coats the inside of ordinary steel pipe with nickel, is said to achieve a corrosion-resistant pipe with the low cost, strength and fabricating characteristics of steel. A wartime development of the Bart Manufacturing Company of Belleville, N. J., their Lectro-Clad process develops a smooth, ductile, pore-free nickel lining fully adherent to the base metal. Moreover, the internally-plated pipe can be welded, reduced and bent (hot or cold) without affecting the nickel lining. In reducing it by the cold reduction method, it is possible to predetermine the thickness of the plating, as both the base and applied metals reduce in equal ratio.

Fully proved in wartime industrial applications, Lectro-Clad piping will be commercially available in over-all diameters up to 18 in. and in lengths up to 20 ft. A complete line of fittings and accessories, similarly nickel-plated, will also be available. The pipe will cost much less than a solid tube of corrosion-resistant alloy. Thus savings are possible in industrial fields where corrosion-resistance is essential. Of equal significance are the possible economies in such residential installations as radiant heating and water supply systems, where the cost of solid corrosion-resistant piping is often prohibitive.

## HIGH FREQUENCY COOKING of farm wastes promises new building boards.

The prospect that radio frequency heating may yield important building boards from straw and cottonseed hulls is raised by recent experiments conducted by the Victor Division of R. C. A. Already established with plastic molders and plywood manufacturers, high frequency heating of farm wastes is entirely logical. For such wastes are either cellulose or ligno-cellulose and are characterized by very low thermal conductivity. Vegetable fibers are further characterized by high bulk, containing much air space, which further reduces their thermal conductivity. Thus the very qualities which have long made them desirable for insulating materials have also worked against their conversion into building boards. Conventional forming methods depend on heat transfer by contact between mold and plastic material. Heat migrates from the surface into the interior, its speed depending upon conductivity of the material.

Since radio frequency permits uniform heating—regardless of thickness or thermal conductivity—its advantages here are apparent. To test this assumption, Victor laboratories have recently completed a series of tests using

both heating methods. With a composition of 83 per cent cottonseed hulls and 17 per cent phenolic resin wallboard samples were fabricated under both surface and high frequency heating. Cross-sections of the samples were then studied. The high frequency samples showed a uniform and homogeneous cross-section, while those formed by surface heating showed deep fissures and insufficient bond.

Fabrication method in the new process calls for preforming the raw material and then pre-heating it by radio frequency for 75 sec., using an average input of 2,000 w. The material is then molded at 335° F., under a pressure of 2,000 lbs. per. sq. in. for 5 minutes. It was also found that, with radio frequency heating, a surfacing of cloth or wood veneer could be included in a single molding operation.

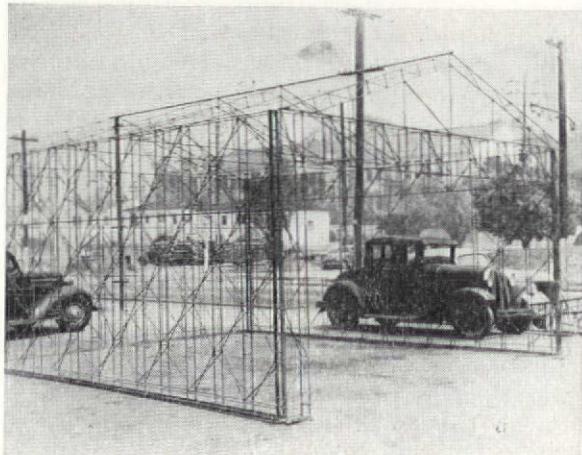
**CUTTING TOOL** makes installations of thermostats in existing buildings economical.

To reduce the cost and clutter of installing their "Personalized Heating" Control system in existing apartment buildings, Minneapolis-Honeywell Co. has developed a new cutting tool for economical installation of the necessary tubing and equipment.



This development allows the company for the first time to make installations in existing buildings at a cost comparable with that of new installations. The new tool is essentially an electric buzz saw attached to the end of a vacuum cleaner hose. With tungsten carbide teeth it cuts a neat groove in the plaster wall just deep enough to receive  $\frac{1}{8}$  in. copper tubing connecting thermostat to heating element. Flexible rubber lips cover the incision and permit the vacuum cleaner arrangement to suck up the plaster dust. The new tool will be manufactured only for the company's dealers.

**PREFAB LIGHT-WEIGHT STEEL** units assemble into rigid frame with all members in tension. Various materials can be used for walls.



FRAMING METHOD APPLIED TO TWO CAR GARAGE

**LOW COST PREFAB** features unusual manufacturing and merchandising plan.

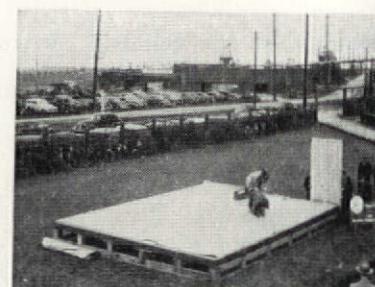
Recently field tested in Tacoma, Wash., by Chicago's Willisway System, their new prefabricated house is as noteworthy for its canny fabrication and distribution approach as for its straightforward and simple design. President R. J. Willis plans to circumvent typical prefab bugaboos by:

► Subcontracting all component parts to established, experienced fabricators at the sources of raw materials. Thus all main structural elements—which are plywood—will be fabricated in the Northwest, while steel joists, stairs, window frames and plumbing assemblies will be subcontracted to Midwest shipbuilding firms.

► Shipping of parts direct to retail dealers in carload lots.

► Avoiding exclusive franchises and using the nation's 21,000 lumber dealers as retail outlets.

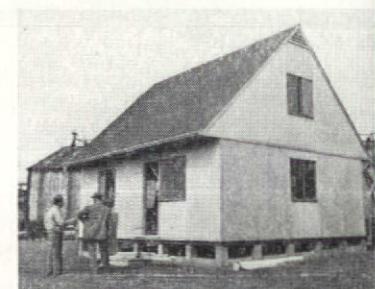
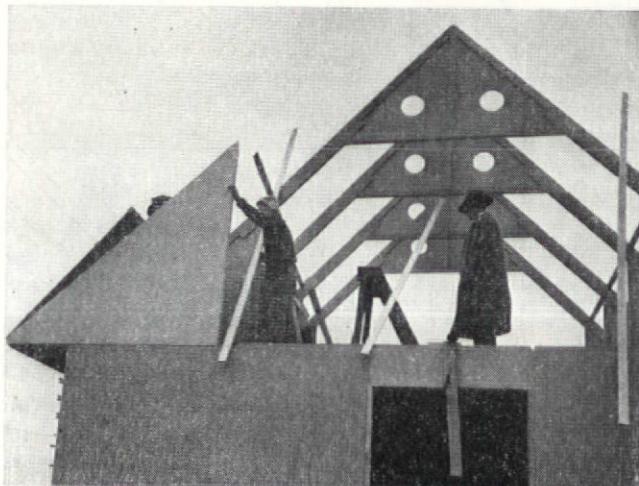
The basic house (called HomeOla) is intended to sell for less than \$3,000 including plumbing and heating. Wall and floor panels are stressed plywood with built-in blanket insulation. Wall panels are 4 ft. by 8 ft.; floor panels are 4 ft. square and have special wearing surface of vertical grain fir. Ingenious triangular roof frames, of built-up plywood with integral bracing, are notched to receive longitudinally-braced roof decking. Attic insulation is attached to back of second story wall and ceiling panels. Basic model has living room, kitchen and bath on first floor, two bedrooms on second.



PREFINISHED floor panels, protected with paper, are installed over steel joists. Erection of outer wall begins.



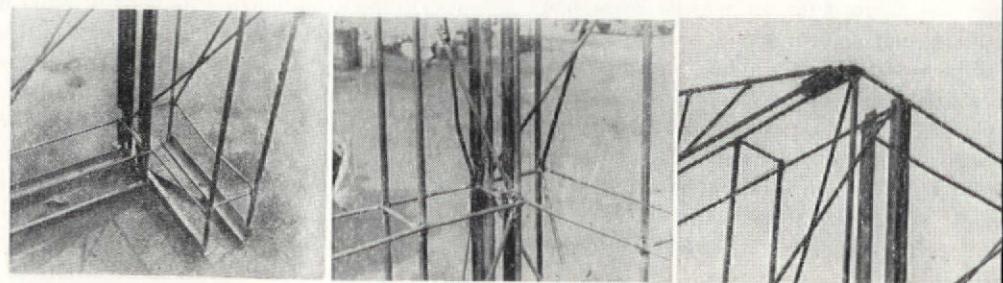
WALLS of first story in place, steel joists to support second story are installed.



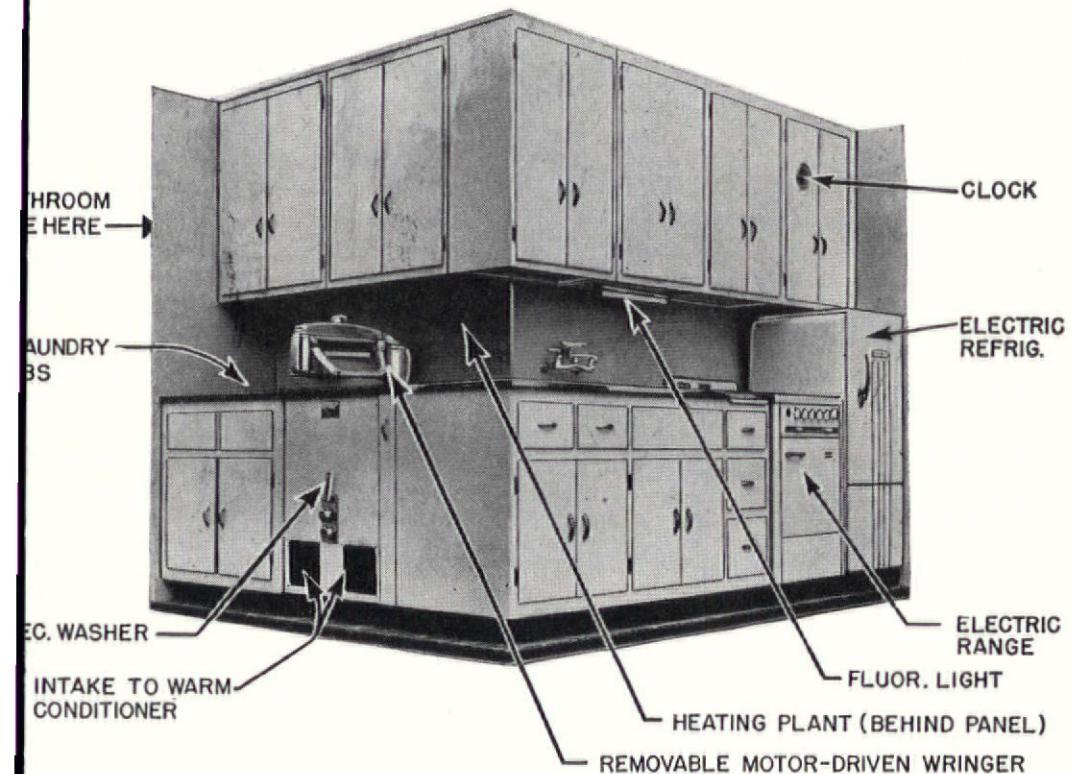
HOMEOLA, 20 ft. by 24 ft., is completely enclosed in a day by a small crew, no part weighs over 75 lbs.

T & T Prefabricated Structures feature a light shop-welded steel framing system in which all members are in tension. The standard-size prefabricated panels are modular and interchangeable, thus allowing variations in wall design. Door and window openings take standard size frames. Panels, locked together with a mechanical joint on the site, form a rigid, self-supporting frame with forces evenly distributed. The system is self-aligning, leveling and plumbing. Although best suited to precast

slabs or stucco on tack-welded metal lath, a type of surfacing material can be hung on the frame. Air space created between the walls facilitates installation of wiring and piping. Lights, Inc. of Los Angeles, developers of the method, have designed a prototype garage which utilizes either gable (shown here), flat, or knee-type roof design. This structure can easily be dismantled and re-erected on another site.



FASTENING DETAILS: PANEL TO FOUNDATION, PANEL TO PANEL, TRUSS TO PANEL



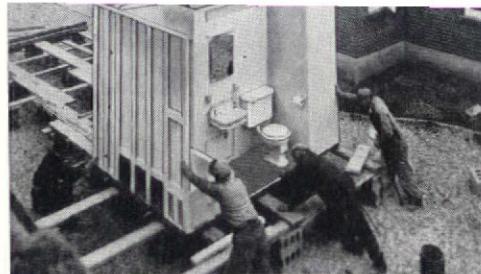
### First PREFABRICATED kitchen-bath-laundry—long awaited in U. S.—appears in Canada.

mechanical core, built and installed as a unit and including all equipment for kitchen, bath and laundry as well as heating plant, last month made its appearance in Toronto. Very similar to a unit promised for 1946 by a U. S. company (FORUM Dec. '45), Canadian Comlock Co.'s "Unutility" apparently scoops the ball on the first actual installation.

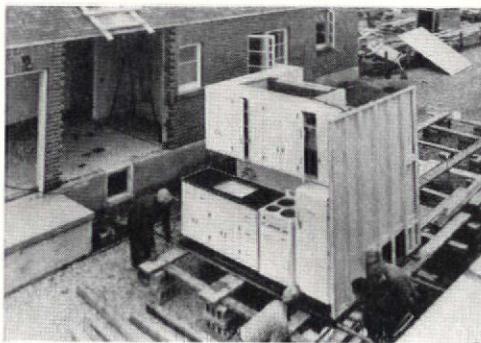
Unutility is a prefabricated kitchen, bath and laundry grouped around a core containing complete heating, plumbing and electrical systems. The kitchen includes: electric stove, refrigerator, clock, lights and outlets; sink, counter and cabinets. Back of the kitchen is a bath which includes partly recessed tub and shower, lavatory and toilet; medicine cabinet,

light, towel racks and holders. The laundry unit has electric washing machine, two tubs, clothes wringer and cabinets. Warm air registers are built in to all three sides, ductwork for rest of house is taken out of top of central core which, besides thermostatically-controlled oil fired furnace, includes complete plumbing system and electrical service center.

The complete unit, 7 ft. 9 in. by 7 ft. 6 in., is fabricated of enameled sheet steel on a steel chassis and comes in two models—the De luxe (shown here) and the Economy. First models are tentatively priced at \$1,800 and \$1,500 respectively although with large-scale production it is hoped to cut the cost to around \$1,500 and \$1,000 respectively.



UTILITY SEEN FROM BATHROOM SIDE



KITCHEN VIEW BEFORE INSTALLATION



MECHANICAL CORE SLIPPED INTO SLOT



HOLE IN WALL READY FOR BRICKING UP

### VENTILATING SYSTEM for gas ranges achieves cooler cleaner kitchen.

cleaner and cooler kitchen will be in the offing for users of gas ranges if the Rochester (N. Y.) Gas & Electric Co. has its way. Experiments conducted by this utility company resulted in a new system which combines room and stove ventilation. It pulls vapors off the immediate region where they are produced, mixes them with hot combustion gases, and conducts them out through insulated piping. Thus greases are kept hot enough to remain vaporized until vented out. The crux of the system is the forced ventilation of the top, oven and grill of the range.

The Rochester development was spurred by surveys conducted throughout the country, which indicated that from 40 to 60 per cent of existing gas users would buy an electric range the next time they are in the market for a stove. This trend—due partly to promotion by electric companies focusing attention on the

cooler and cleaner features of electric cooking—has the gas industry worried. And to combat the situation, the gas industry has initiated a research program of which this new ventilation system is a part. Gas ranges are known to give good, economical performance. With this new system, it is the industry's hope to achieve cooler, cleaner and odorless kitchens at an installation cost of from \$50 to \$60.

Wall dirt or condensed kitchen grease is not due to the fuel used, but to the oils and fats distilled from food in cooking operations. High temperatures and faster rates of cooking accelerate these problems, while low temperatures and slower cooking reduces them. Because gas has larger quantities of heat available and is a cheaper fuel, there has been a tendency for gas users to employ high temperatures to gain speed. Electricity is ordinarily more expensive for cooking, and in order

to keep costs down, low temperature cooking is almost a necessity. The gas industry points out that the apparent cleanliness of electric ranges, therefore, is not due to the fuel so much as to the type of cooking the housewife has been forced to accept.

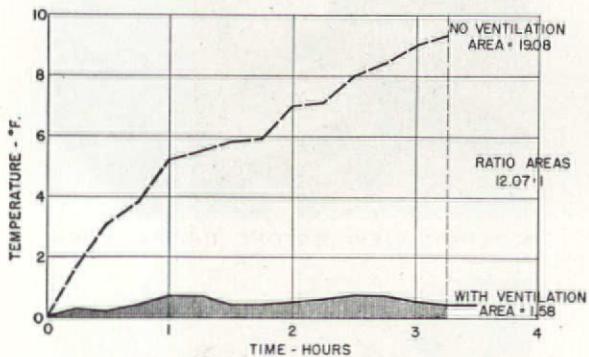
With the new ventilating system, warm gaseous products of combustion—caught at the source along with vaporized cooking oils and greases—become the vehicle for elimination without condensation. A wall grille above the stove attached to the ventilating system evacuates the products evolved on the top units. The oven and broiler are also connected to this duct through a damper. The housewife has complete control over the ventilating system, making the oven discharge into the room or duct as she desires. If the damper is closed, the oven and broiler products of combustion and cooking vapors are expelled into the room

via the backsplasher vents in the normal manner. An insulating type duct is used to keep the flue warm. The oven or broiler lighted for preheating warms the inner surface of the duct and subsequently, when the cooking operation is carried on, the greasy vapors do not strike cool surfaces. A blower is located in the basement and the discharge is just above the ground level.

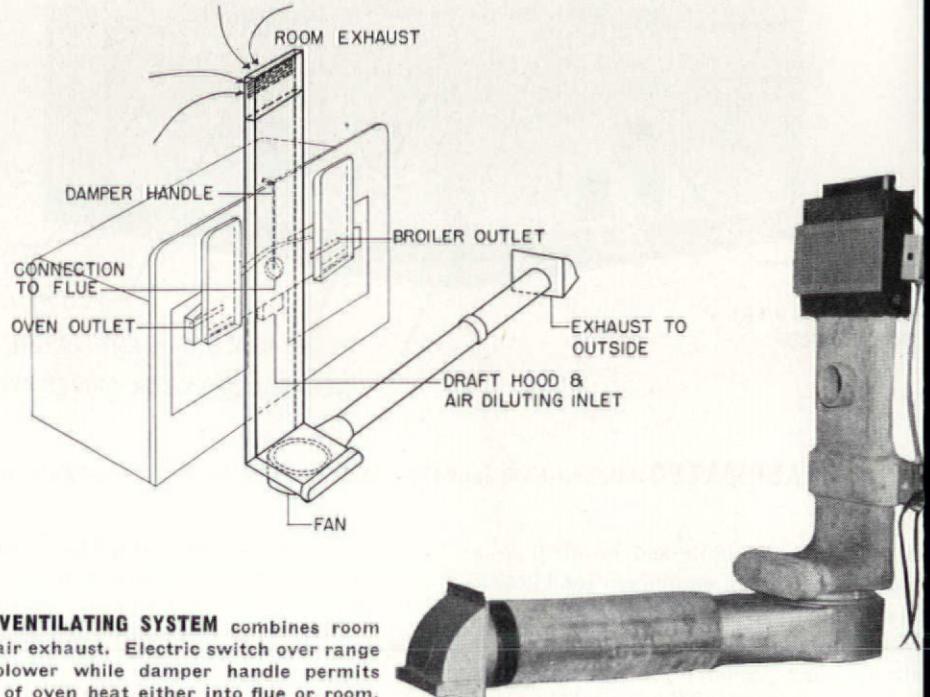
This type of ventilating system has been installed in a number of Rochester homes,

In line with this program, two range manufacturers will equip certain models of their first production with the necessary back, damper, etc., to apply the system. Another manufacturer, the Electro-Specialty Co. is producing a package unit for the ventilating system. It will include the blower unit, wall grille, outside discharge hood, switches, etc. It will be complete to do the job with the exception of wiring connections and transite pipe. Small changes to the back of 1942

ranges will readily adapt them to the system. For postwar use, however, range designs are being considered which will eliminate the need of placing the ventilating duct in the wall behind the range. It will be incorporated as a part of the range itself. All that will be necessary to install this complete system will be to cut a hole in the floor under the range, connect the blower and discharge duct on joists in the basement or space below the kitchen floor.



some in existing buildings, two in new structures. No two jobs were alike and four different makes of ranges were used. After three and a half years' use, there is no grease condensation on kitchen walls or in any part of the system. Another important by-product of the system is a cooler kitchen: tests under controlled conditions indicated that even in long baking operations, the air temperature remained unchanged (see chart).



**KITCHEN VENTILATING SYSTEM** combines room and oven air exhaust. Electric switch over range controls blower while damper handle permits discharge of oven heat either into flue or room.

## BUILDING REPORTER



### PREFABRICATED LIGHT METAL construction for variety of assemblies.

Struc-Lok, a new lightweight construction based on a patented method of snap assembly requiring no bolts, screws, rivets or welds, is particularly adaptable where lighter weights are requisite and strength requirements are correspondingly lower. Fabricated in both aluminum and steel, Struc-Lok consists of three basic parts: framing, sheets and fittings. Assembly is easy, all parts snapping together by hand. Special fittings connect and hold the framing together while the flanged edges of the sheets are snapped into die-rolled frame channels. As the edges of the sheets snap into place they lock the framing and sheets into permanent position, providing a strong, lightweight unit and eliminating reinforcing braces. Struc-Lok is available with sheets in 26 and 24 gauge steel and .020 in. to .030 in. thickness of 61 ST alloy aluminum. Perforated or expanded metal sheets may also be used, and openings, louvers, doors, and other conventional construction details are easily incorporated. Corner caps and decorative molding which snap into place give an attractive machine-finished appearance. Uses for Struc-Lok include light machinery housings, refrigerators, kitchen cabinets, air conditioning equipment, furnace casings, storage bins, shipping containers, shelving and radiator covers. It is also suitable for interior lining and exterior sheathing and roofing.

*Manufacturer:* Lindsay and Lindsay, 222 West Adams St., Chicago 6, Ill.

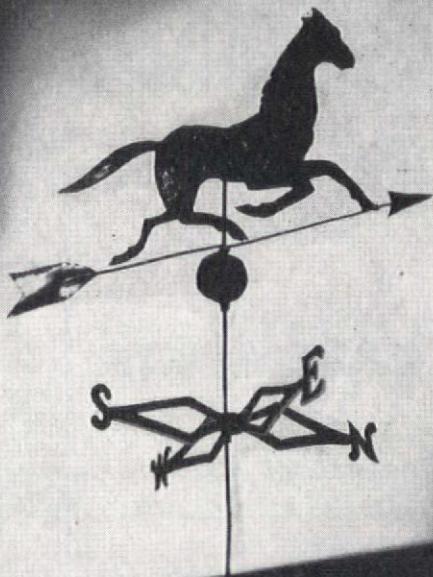
### ELECTRONIC AIR FILTER employs Airmat paper collecting element.

Introducing a new principle in electronic air filtration, the arrestance rating of the new Electro-Airmat is 90 per cent or better with atmospheric dust or smoke when tested by the discoloration method. This efficiency is obtained at 35 f.p.m. velocity through the Airmat media and the standard rate of 1,000 c.f.m. per standard-size 24 in. by 24 in. unit. The collecting element of the unit is electrostatically charged air paper. This is a cellulose product compound of a number of plies of porous, tissue-like sheets formed of short fibers in a pleated arrangement. When electrostatically charged, the plies tend to separate, each fiber becoming a collecting electrode which attracts and holds dust and smoke particles. When the Airmat paper has accumulated its dust load, it is removed and replaced with clean material by a mechanical loader. Spare cells loaded with clean Airmat can be provided for convenience. The filter weighs 40 per cent less than electronic filters with metal plate collectors, and requires 30 per cent less floor area. Full height ionizers reduce electrical losses due to fewer wire ends. Power pack operates on 110 v., 60 cycle single phase current. Total power consumption is approximately 220 w. at 110 v., including transformer losses in the power pack, etc.

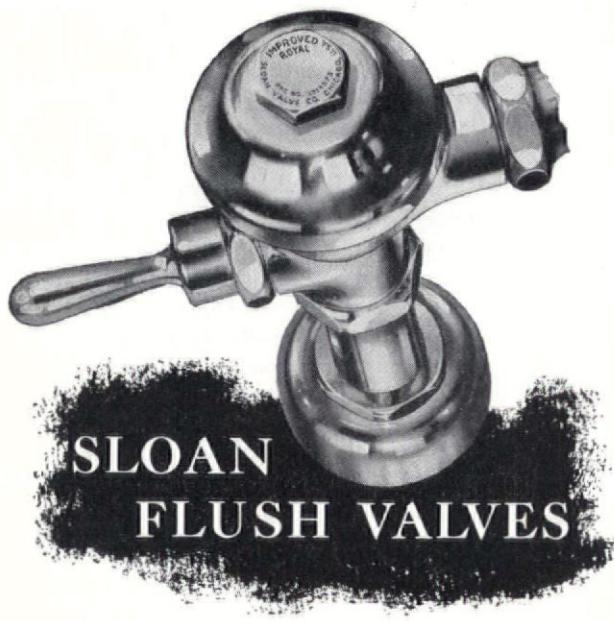
*Manufacturer:* American Air Filter Co., 125 Central Ave., Louisville 8, Ky.

(Continued on page 173)

# Like a weathervane . . .



## The Royal never needs adjustment



**SLOAN  
FLUSH VALVES**

**Because there's nothing to adjust**

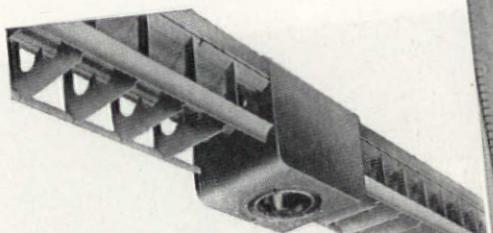
In the ROYAL it is simplicity of engineering design—*plus* precision manufacture. This Flush Valve eliminates the problems of regulation or adjustment—and insures accurate and lasting performance.

The dependability of the ROYAL is proven by the fact that *more* ROYALS are sold than any other Flush Valve. It is "standard equipment" with discriminating builders and owners throughout the country. In fact, entire school systems, hotel chains, hospitals, industrial institutions, etc., use ROYALS exclusively.

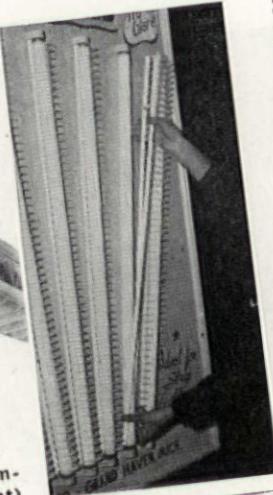
For the best in Flush Valves specify Sloan—remember, there are more Sloan Flush Valves sold than all other makes combined.

**SLOAN VALVE COMPANY**  
4300 WEST LAKE STREET, CHICAGO 24, ILLINOIS

## BUILDING REPORTER



COMMERCIAL unit utilizing slimline and spot by Watco Engineering Co., Cleveland, Ohio. (above)



SNAP-ON louver for fluorescent lamp by Camfield Mfg. Co., Grand Haven, Mich. (right)

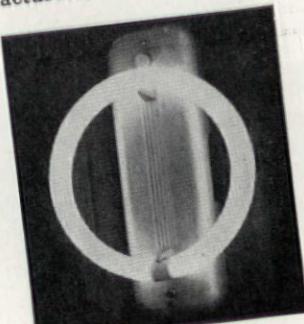
### NEW FIXTURES using Slimline and Circline fluorescent lamps

Samples of new lamp sources for commerce, industry and home were exhibited in New York recently at The Vic Lighting Jubilee. Collaborating with General Electric Co. in this show were some 135 electrical lighting equipment manufacturers, some of whose applications are shown herewith.

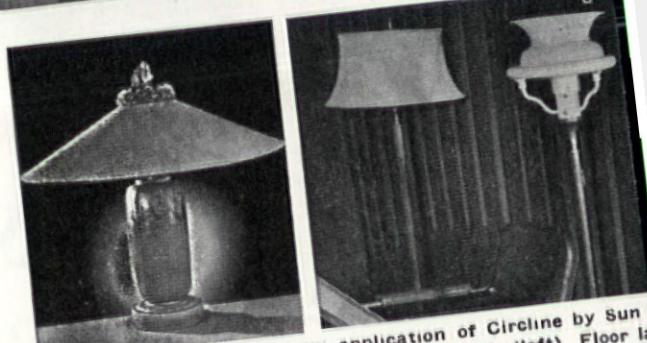
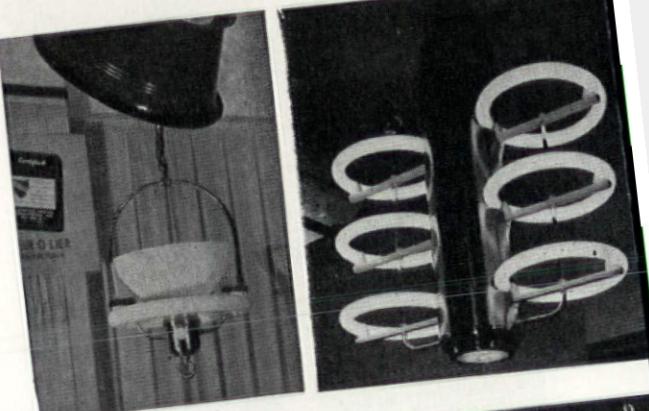
1 WALL fixture mounting by Spero Electric Co., 18222 La Salle Ave., Cleveland 19, Ohio.

2 COMBINATION ceiling fixture Gruber Brothers, 72-78 Spring St., New York 12, N. Y.

3 COMBINATION ceiling fixture with down light by Efc Corp., Trenton, N. J.



1 2



MODERN pottery table lamp application of Circline by Sun Studios, 225 Fifth Ave., New York 10, N. Y. (left) Floor lamp combining circline and indirect incandescent lamp by I.E.S. manufacturers. (right)

### RESIN GLUE bonds a wide variety of materials.

Cascophen, a new resorcinol resin type glue, is a dark, white-colored liquid adhesive supplied with a separate powder catalyst. Its outstanding feature is its ability to develop boil-proof, durable, phenol-resin type bond at ordinary room temperatures. This makes available the quality of hot pressure-cured resin for joint assembly, gluing thick laminations, a molding resin. Possessing high strength, even in a thin film, it is adaptable for use on sawed surfaces or on joints which may not be perfectly fitted. It requires only sufficient pressure to ensure good penetration into the surface. Developed during the war and used extensively in construction gliders, rafts, etc., Cascophen has been found effective bonding materials with some degree of porosity. Such materials include cloth, glass fiber, asbestos boards, and plastic. Manufacturer: Casein Co. of America, 350 Madison Avenue, New York 17, N. Y.

(Continued on page 17)

### ONLY Pella CASEMENTS offer BOTH these convenience features



#### 1 ROLSCREENS

The original inside screens that roll up and down like window shades. Always in place. No putting up. No taking down. No painting. No storing. Inconspicuous. Admit more light. Screen wire is 16-mesh, rust-proofed "AluminA" with triple selvage plus 4 double reinforcing strands at edge for extra strength. 10 year guarantee.

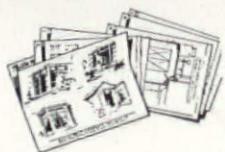


#### 2 DUAL GLAZING

Protects against winter cold and summer heat. The truly modern year around "storm" window. No storing. Consists of a single panel of Libbey-Owens-Ford DSA glass set in rubber-lined, rust-proofed steel frame mounted on sash. Easily removed for cleaning. Highly efficient for air conditioned homes and buildings.

Free FOR YOUR FILE 22 loose pages of scaled details on stock-size Pella Casement Units. For all types of installations. In handy A.I.A. File Folder. Send for your FREE set today! Write: ROLSCREEN COMPANY, Dept. A-16, PELLA, IOWA.

ALSO MAKERS OF FAMOUS PELLA VENETIAN BLINDS





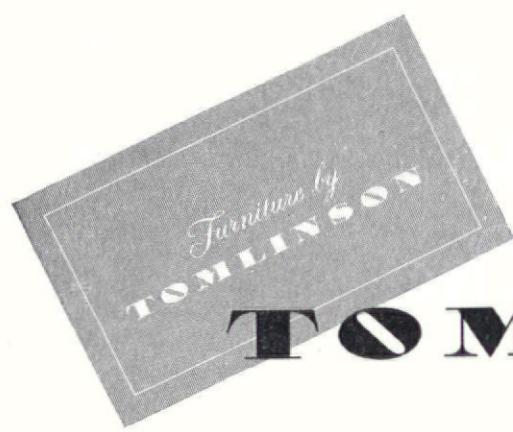
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IN NEW YORK:

385 Madison Avenue

IN CHICAGO:

1666 Merchandise Mart



*Furniture by*

**TOMLINSON**

IN PITTSBURGH:

907 Penn Avenue

AND IN HIGH POINT,

North Carolina

## METAL WINDOW with self-storing feature.

The new Rusco All-Metal Self-Storing Combination Window is a compact, permanent single window unit that provides screen, storm sash and weatherstripping plus an ingenious, patented spring-clip arrangement that permits the lower storm sash to be raised and held in a storage space provided behind the upper sash. Use of this window eliminates seasonal window changing, assures year round rain-proof, draft-proof ventilation and reduces fuel costs. The light screen and glass inserts are simply and easily removed for cleaning.

*Manufacturer:* The F. C. Russell Co., 1836 Euclid Ave., Cleveland, Ohio.

## PLASTIC FABRIC for curtains, awnings, upholstery.

Velon plastics possess a wide range of mechanical, physical, and optical properties made possible by varying the basic

chemical ingredients, by processing and coloring. They can be molded or shaped to size at fairly low temperatures, cast and machined like metals. They can be drawn into rods, tube or threads for weaving into multifilament textiles of floss-like fineness and softness. Or they can be laminated with other materials such as glass, metal or wood. Velon plastics are resistant to chemical solvents and are water, weather and rust proof, non-combustible, tasteless, odorless and non-toxic. They can be sewed, cemented or heat sealed. Color is compounded into the original formula, thus it is sunfast and fade proof. In the postwar world Velon can expect to find application in clothes, upholstery, curtains, radio grills, awnings, luggage, tubing, seat coverings, cables, and ropes.

*Manufacturer:* The Firestone Tire & Rubber Co., Akron, O.

## GLASS LINED SILO mechanically unloads unspoiled silage from the bottom.

This glass-lined steel silo which is mechanically unloaded from the bottom by means of an engine, keeps silage air tight and fresh, in the same manner as fruit is preserved in a glass jar. Silage is removed through a 24 in. hopper opening at



the bottom, reducing labor and hazards. The engine also feeds burned out air into the top of the silo to keep out oxygen which creates mold. From the mouth of the hopper an agitator mast projects a few feet into the silo. A 1/2 h.p. motor turns the mast which has attached to it short lengths of heavy flexible tubing equipped with weights which knock down silage. Small blades in the

mouth of the hopper force the silage out. Cost of the new

unit, which has a glass coated exterior eliminating painting

is comparable to a standard silo, although its weight is about

one-sixth that of a standard concrete silo. It is to be in pro-

duction for the 1946 corn crop.

*Manufacturer:* A. O. Smith Corp., 3533 No. 27th St., Milwaukee, Wis.

## AXIAL PLANE lamp mounting gives balanced lighting.

Tandemlamp, a patented fluorescent lighting principle, places one lamp above the other. This lamp arrangement, according to the manufacturer, permits the light from each lamp to be reflected symmetrically from a smaller reflector. Alzak aluminum specular reflectors are used to obtain accurate control of light and compactness of equipment. Louverplas, a plastic sheeting with fine, parallel, translucent louvers separated by clear plastic spacings and traversed by minute prisms is used at the bottom of the fixture for brightness control.

*Manufacturer:* Doane Products Corp., Meriden, Conn.

## TEMPERATURE AND HUMIDITY CONTROL unit for homes, office and small stores.

Formerly known as Reversatemp, the new Airtopia is a single compact unit which gives constant year around temperature and humidity control together with air filtration. It keeps room temperature constant despite outside weather conditions, alternating between heating and cooling as required. Smallest Airtopia, 3 1/2 ft. by 5 ft. by 7 ft. high, is suitable for a 7 room house, small office or store building. Compressor and motors are electrically powered. According to the manufacturer, original cost and operating expense is less than the commonly used combination of combustion and compression refrigerating systems. Other size Airtopias are also available.

*Manufacturer:* Drayer & Hanson, Inc., 767 E. Pico Blvd., Los Angeles 21, Calif.

(Continued on page 180)

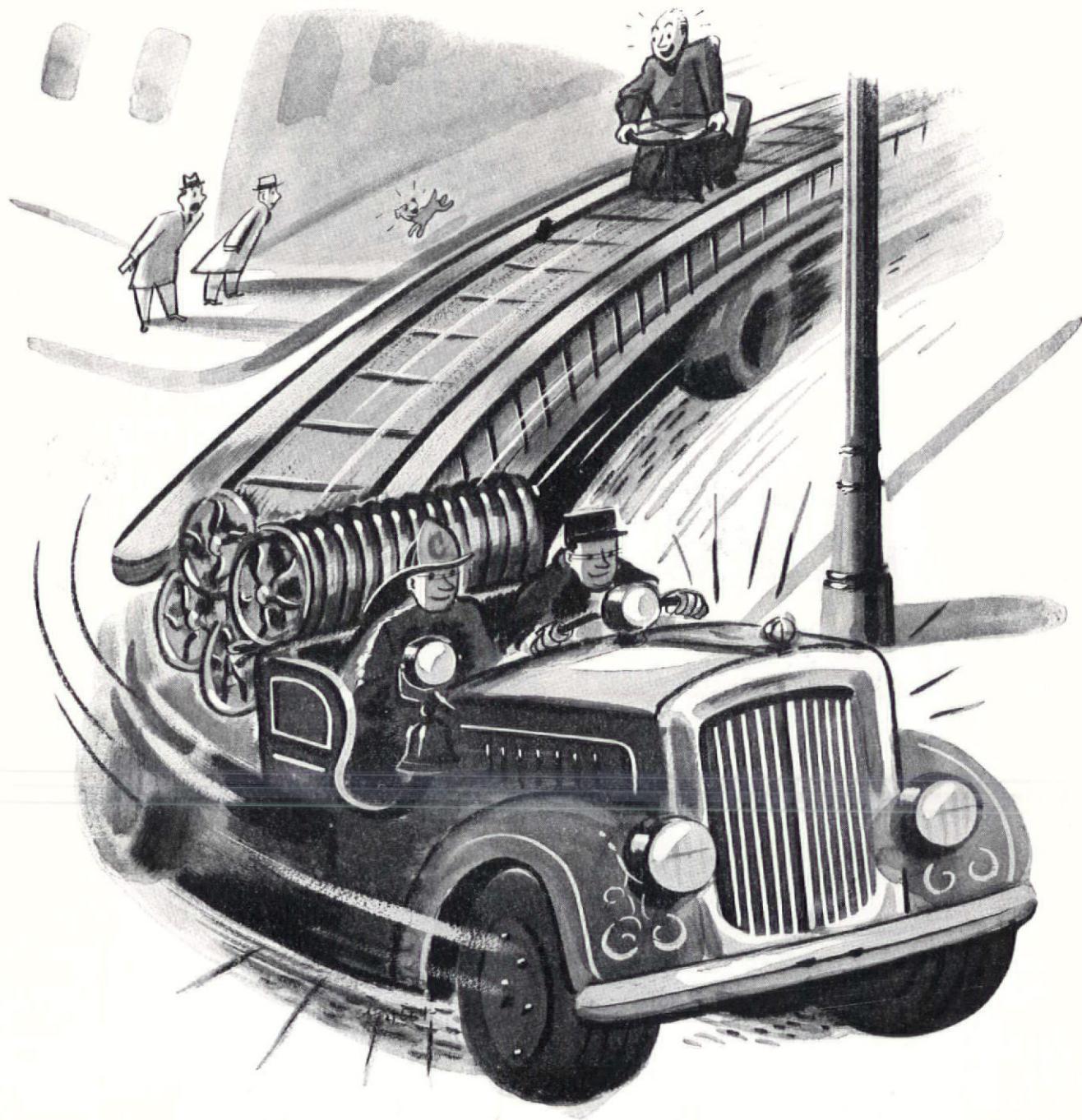
**AT YOUR REQUEST AND WITHOUT CHARGE,** Monarch's complete staff of weatherstrip designers, engineers and heat-loss experts goes to work for you . . . to help you to determine quickly and surely the most practical weatherstrip design for every window and door, the most satisfactory weatherstrip material for the job under consideration, the exact heat loss you can count on with different types of weatherstrip units. Want to take work and worry off your shoulders? Then write for details of Monarch's Specialized Service to Architects.



# MONARCH METAL WEATHERSTRIP CORP.

6331 Etzel Avenue

St. Louis 14, Mo.



## Teamwork helps cut corners

Cooperation counts in any business . . . especially yours. We can make the best window shades and Venetian blinds in the world (as we modestly think we do) but we honestly couldn't do it without our dealers. They keep us posted on what you want in blinds and shades. They study your installation prob-

lems so they can put up our products to give you years of dependable service. When you specify Columbia shades and blinds, you're buying the results of a team that has joined up to give you the most for your money!

See Sweet's Architectural Catalogue for more complete information on Columbia products.

*Columbia* WINDOW SHADES  
AND VENETIAN BLINDS

THE COLUMBIA MILLS, INC. • 225 FIFTH AVENUE, NEW YORK 10, N.Y.

# Will your new home



**Tried... Proved... SUCCESSFUL**  
**From Boston to San Diego... . . . From Bismarck to Miami**

The Servel All-Year Air Conditioner is operating successfully in hundreds of installations from coast to coast. Some have been running for more than four years. The equipment is tried, tested... and approved by users everywhere.

**This prize-winning design**  
in the National Association of  
Home Builders' Design Competition  
was sponsored by  
Charles A. Nixon, Chicago  
Architect, Carl A. Kastrup  
A. I. A.—Associate Architect  
Warren Shultz, Forest Park  
Ill. (Scale model created by  
Diorama Corp. of America.)

# Will be modern in ten years?

You can tell clients "Yes" when you install  
**Servel All-Year Gas Air Conditioning**



HOMES equipped with Servel All-Year Gas Air Conditioning not only offer a "new quality of living," but they also stay modern longer, maintain their resale value on a higher level.

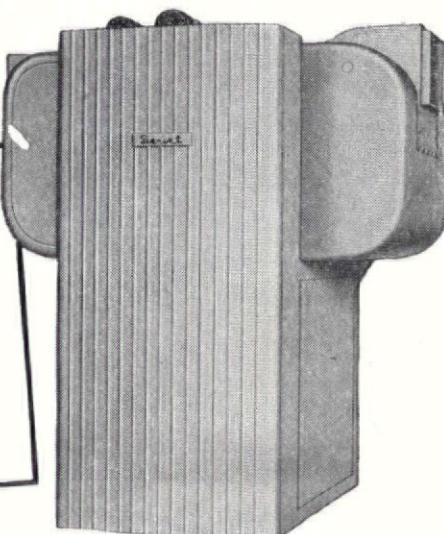
These important advantages are substantiated by leading mortgage loan officers everywhere. Typical is this comment by Mr. E. C. Baltz, Secretary of the Perpetual Building Association, Washington, D. C.: "In addition to providing comfort every day of the year for homeowners, All-Year Gas Air Conditioning will help to reduce the obsolescence rate of homes. No matter what other new developments are perfected in the next ten or twenty years, the home with All-Year Gas Air Conditioning will be more up-to-date."

The Servel unit itself is the last word in all-year air conditioning equipment. It heats and humidifies in winter, cools and dehumidifies in summer, circulates filtered air at will . . . *all with one compact unit*. The homeowner selects the indoor climate he wishes by simply touching the central "Selectrol" control.

And, unlike many other features now considered essential in the modern home—guest room, extra bathroom, laundry, etc.—which are used only intermittently, the Servel unit brings extra comfort to the entire family *every day in the year*.

Get the full story on Servel All-Year Gas Air Conditioning for your clients now, from your local Gas Company, or by writing direct to Servel, Inc., 2601 Morton Avenue, Evansville 20, Indiana.

**Servel**  
*All-Year GAS AIR CONDITIONER*



## HEAT CIRCULATOR prevents local air stratification.

Suspended from the ceiling, the Reco Heat Circulator fan blows air upward, forcing hot ceiling air down the walls to intermix with room air. Thus uniform temperatures at the floor, body level and ceiling are provided. Elimination of wasted heat at the ceiling also saves fuel costs. Its operation provides comfortable heat for rooms with alcoves, numerous windows or other heating handicaps. It also speeds heating of large areas which are not heated constantly. It is available in 12 in., 16 in., 20 in. and 24 in. diameters and is furnished for 110/115 v., 60 cycle, A.C. motors.

*Manufacturer:* Reynolds Electric Co., 2650 W. Congress St., Chicago 12, Ill.

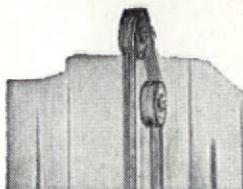
## AIR FILTER for machinery requiring air filter equipment.

Originally designed and tested for railroad service, the Far-

Air EC filter is now available for quick installation in air compressors of all types, small internal combustion engines and any machinery requiring air filter equipment. Complete unit comprises the filter element enclosed in a cylindrical steel housing and a cast iron adapter base. The filter element is of the same herringbone crimped screen design used in other Far-Air ventilating filters. It is spirally wound into a 2 in. pack and for average service conditions the EC-2 filter contains two packs, the EC-4 heavy duty filter contains 4 packs. Filters are installed by screwing the adapter fitting, which has a 3 in. pipe thread, onto the intake pipe. This remains permanently in place and the filter unit is locked into the adapter. Far-Air EC filters will be available in diameters from 7 in. to 14 in. with capacities from 90 cfm to 730 cfm.

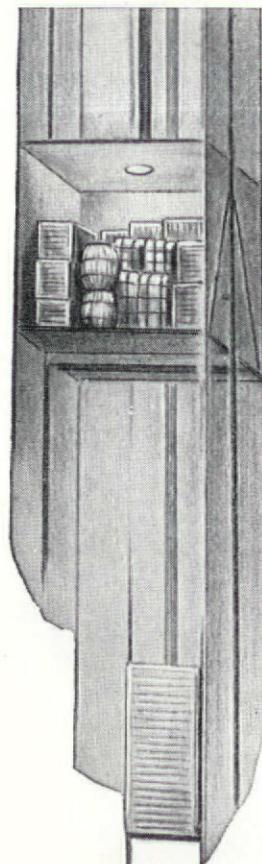
*Manufacturer:* Farr Co., 2615 Southwest Drive, Los Angeles, Calif.

# FREIGHT ELEVATORS



by Sedgwick

THESE NEW SEDGWICK ELECTRIC ELEVATORS ARE EXPRESSLY DESIGNED FOR FREIGHT USE—ENGINEERED FOR RUGGED, WORK-A-DAY SERVICE MOVING MATERIAL AND MERCHANDISE WITHOUT BREAKDOWN, WITH MINIMUM MAINTENANCE.



These simple, hard working freight elevators are the result of more than 50 years' experience manufacturing elevators and dumb waiters—electric and hand power—plus the knowledge gained from wartime production of airplane elevators, freight and passenger elevators and galley dumb waiters for the Navy, Coast Guard and Merchant Marine.

### SEDGWICK FREIGHT ELEVATORS OFFER MANY ADVANTAGES

1. Worm geared V-groove traction machines with *internal helical gearing*.
2. Self-aligning motor mountings.
3. Special, heavy duty motors.
4. Special steel gear and sheave shafts.
5. Anti-friction bearings.

*And Sedgwick Electric Freight Elevators are manufactured in many sizes and capacities. They can be built to lift loads weighing well over 100,000 lbs. or loads of 2500 lbs. or less.*

### SEDGWICK MANUFACTURES COMPLETE LINE OF VERTICAL TRANSPORTATION EQUIPMENT

In addition to Electric Freight Elevators, Sedgwick makes a complete line of electric and hand power passenger, hospital, residence and sidewalk elevators and electric and hand power dumb waiters—all engineered to solve "man" handling and materials handling problems through greater operating efficiency.

### WRITE FOR YOUR COPY OF SEDGWICK'S NEW SPECIFICATION BOOK

If you have not yet received your copy of the 24-page ready reference booklet, "Sedgwick Standard Specifications for Elevators and Dumb Waiters," write for it today.

And if you are stymied by perplexing lifting and lowering problems—*tell us about them*. Our engineering staff is at your service now ready to help and show you how Sedgwick Freight Elevators—

fact is, all Sedgwick elevators and dumb waiters—reduce costs by increasing "man" handling and materials handling efficiency.



**SEDGWICK MACHINE WORKS, 140 W. 15th St., New York 11, N. Y.**  
ELEVATORS • ROTO-WAITERS • DUMB WAITERS • SPECIAL LIFTS

## ELECTRIC RANGES feature automatic timer for oven and range top and deep well cooker.

The new Kelvinator range line is comprised of three models headed by the Automatic Cook, which starts, times and stops all cooking operations. This self starting electric range has an automatic timer that controls oven operations, top of the range and deep well cooking. The Automatic Cook consists of an electric clock, master cooking timer, selector switch, minute timer and twin appliance outlets in a trim panel. These two outlets can be used to automatically control such appliances as coffee makers, or toasters. Multiple-speed surface



units provide instant direct contact heat. A completely equipped 6 qt. scotch kettle is built-in for thrifty cooking of entire meals. An additional feature is a thermostatically controlled warmer drawer which keeps food at serving temperature or warms plates. It can also serve as a utility drawer. The two unit broiler oven is large enough for a 25 lb. turkey, has a convenient smokeless broiler, bastes automatically, and has an automatic floodlight recessed in the back. Two additional utility drawers are provided at the bottom of the range. The other two range models embody the basic features of the Automatic Cook model. Some of the other features common to all three models are: rigid one-piece welded steel bodies; one-piece steel cooking top and backguard; porcelain enamel finish; rod type surface cooking units; reversible seven position switches; over-size oven equipped with 3,000 w. top broiler unit and 2,400 w. bottom baking unit.

*Manufacturer:* Kelvinator Div., Nash-Kelvinator Corp., 14250 Plymouth Rd., Detroit 32, Mich.

## HEAT LAMP employs more rugged type of glass.

The new infra red lamp producing radiant heat for comfortable body warmth, is built of special ruby glass so rugged that it can toss off water without cracking. Heretofore infra red bulbs cracked upon contact with liquids. The new glass, however, has withstood a temperature shock test of more than 500° F. differential. This ability makes it more suitable for use in the bathroom where it might easily come in contact with water drops. It is also suited for other domestic applications such as drying small articles, drying hair, and therapeutic purposes. Made of red glass, both to reduce glare and distinguish it from the ultra violet sunlamp, the new heat lamp consumes 250 w. of electricity and screws into a regular household socket.

*Manufacturer:* Westinghouse Lamp Div., Westinghouse Electric & Mfg. Co., Bloomfield, N. J. (Continued on page 182)



*The Northwest presents, with pride,  
this ZONE-CONDITIONED home . . .  
in The Highlands, Seattle, Wash. Archi-  
tect—George Wellington Stoddard.*

... and the big news in house-heating  
is PAYNE ZONE-CONDITIONING...sweeping the  
country from border to border and coast to coast

From North, East, West and South, they pour in . . . the thousands of inquiries for our booklet on ZONE-CONDITIONING, "successor to old-fashioned central heating". Proof that architects, builders, owners—all are interested in a house-heating system geared to modern living. ★ As in the home illustrated, two or more compact, streamlined, gas warm-air furnaces, separately controlled by zones or rooms, provide **flexibility** obtainable in no other way. ★ PAYNEHEAT pioneered and perfected this method, time-tried but modern as today's news. Inquire!

**PAYNE FURNACE COMPANY, BEVERLY HILLS, CALIFORNIA**  
(One of the DRESSER Industries)

**PAYNEHEAT**  
OVER 30 YEARS OF LEADERSHIP



## DOOR STOP NUT eliminates door stops.

Use of the Door Stop-Nut eliminates banging of doors against walls or furniture, and facilitates cleaning by doing away with floor door-stops. Easy to install, the stop-nut slips over the top knuckle of the door hinge with flange down. Hinge pin holds it secure. Size of the cut out section controls the radius of door opening. Two types are available—one limits openings to 90° while the other permits the door to open to 180°. *Manufacturer:* Door Stop-Nut, Inc., 810 W. 76th Street, Chicago 20, Ill.

## ELECTRIC WATER COOLERS have stainless steel cabinets housing improved mechanical features.

Coolstream pressure bubblers and bottle-type electric water coolers, powered by Kelvinator, combine good engineering, newest designs and sanitary operation with efficiency and low

operating costs. They have a one-piece stainless steel cabinet, and a top plate including cover and basin, molded into a one-piece splash-proof design. The foot pedal is of rugged tubular construction and can be operated from front or sides. The coolers are engineered to comply with all sanitary codes and provide sanitary protection against water from the mouth returning to the jet. A new patented method of heat exchange is employed for instantaneous cooling and maximum peak draw, resulting in a high capacity in relation to the minimum current consumption for the unit. In the bottle type cooler, the bottle is refrigerated and concealed, insuring continuous flow of cooled water.

*Manufacturer:* The Coolstream Corp., 55 W. 42nd St., New York 18, N. Y.

## COMBINATION REFRIGERATOR and frozen food chest in new postwar models.

Four 1946 refrigerators—three of 7 cu. ft. and one of 9 cu. ft. capacity—are announced by Kelvinator. They feature new interior and exterior styling, greater provision for frozen food storage and an array of mechanical and convenience developments. The 9 cu. ft. model known as the Moist Master, is a

triple range unit. It has special provisions for freezing and storing frozen foods, for the protection of high moisture foods, and for general storage of average foods. This unit has a freezer capacity of approximately 9 lbs. of ice cubes and more than 35 lbs. of packaged frozen foods. For protection of high moisture foods, the Cold Mist Freshener

feature employs a separate set of cooling coils concealed in the walls of the cabinet surrounding the freshener. Model CS-7, the lowest priced of the group, incorporates all the basic Kelvinator engineering and construction features. A 7 cu. ft. model, it has a freezer capacity of 9 lbs. of ice cubes and 20 lbs. of packaged frozen foods. It also has 12.2 sq. ft. of shelf area. Model C-7, a 7 cu. ft. model, has four additional features: roomy vegetable Crisper, sliding meat chest, five-way Magic Shelf and a 1 1/4 bu. vegetable bin. Model CD-7, also a 7 cu. ft. model, has double Crispers with glass covers, 13.1 sq. ft. of shelf space and a freezer capacity of 9 lbs. of ice cubes and over 30 lbs. of packaged frozen foods.

*Manufacturer:* Kelvinator Div., Nash-Kelvinator Corp., 14250 Plymouth Rd., Detroit 32, Mich.

## CABLE TESTER AND LOCATOR finds buried cable or pipe without digging.

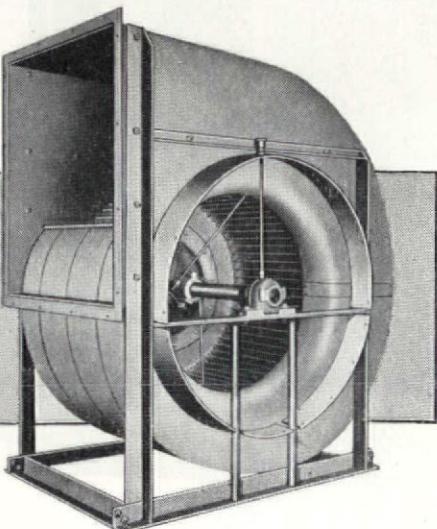
In simple operation the Stewart Cable Tester & Locator Combined tells where cable or pipe is buried and how deep. It also locates shorts, crosses, grounds and wet spots. The new instrument—designed for industrial concerns, public utilities, light and power field, telephone service, forestry and many others—locates the exact path of lines to or from buildings,

finds positions of water mains in streets and has a lamp circuit for checking connections after test has been set up. It is furnished with detector coil and neutral exploring coil. Built-in level in coil enables operator to maintain accuracy. The case, 12 1/2 in. by 7 1/4 in. by 11 in. high, is light weight and ruggedly built.

*Manufacturer:* W. C. Dillon & Co., Inc., 5410 W. Harrison St., Chicago 44, Ill. *(Continued on page 186)*

## usAIRco

Heavy Duty • Centrifugal  
BLOWERS



## ...The Best Buy for Efficient Air Delivery!

For all types of air conditioning, heating and ventilating in public buildings, industrial and commercial applications, usAIRco heavy-duty centrifugal blowers are widely used. (One of the most frequently specified blowers in the ventilating field is the single inlet type, illustrated above.)

Factors to consider in the proper selection of blowers are quietness of operation, efficient delivery of air (or exhaust), ease and economy of installation, and long-life operation. usAIRco Centrifugal Blowers meet all these requirements satisfactorily.

Engineers, architects and contractors are urged to submit problems involving the use of blowers to the usAIRco Engineering Department. Prompt, accurate facts on the choice, application or installation of blowers will be furnished. On your next job, specify usAIRco Centrifugal Blowers . . . far your best buy for efficient air delivery!

Factory Representatives  
in Principal Cities

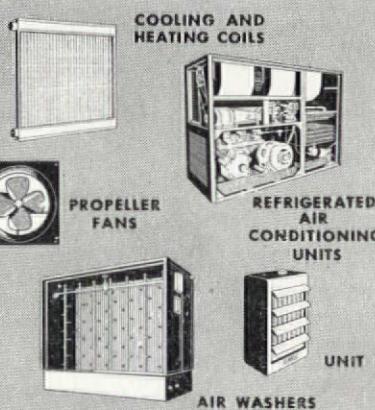


## United States Air Conditioning Corporation

Northwestern Terminal, Minneapolis, Minn.



Makers of the most complete line of air handling equipment

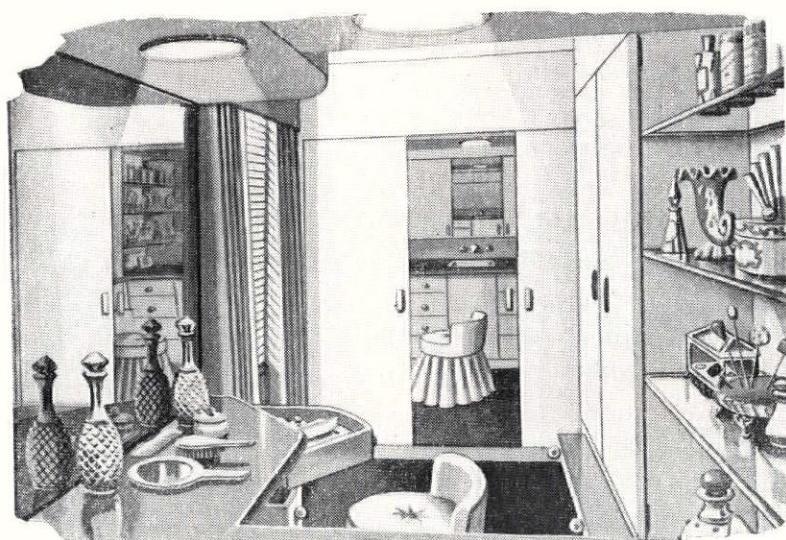


*New baby's room  
today—*



*parents' room  
tomorrow!*

- You can turn up two remodeling jobs in one room with this space-conserving idea—and a literally unlimited number of clients.
- It's simple, and based on the fact that a special room for that new baby means less work for his mother. The end of a bedroom—or part of an adjoining room or hall will do it. Build the extra wall with smooth, strong, easy-to-clean Masonite\* Presdwoods. And the same material makes special work-saving furniture—built-in or movable. Presdwoods are handsome, long-lasting, moisture-resistant . . . they'll save inches all around . . . and take any kind of decorative treatment.



Architect: EARLE W. BOLTON, Jr.

- When Baby grows into a full-size room, remodeling makes an efficient dressing room for his parents. Presdwoods again can make handsome, efficient cabinets, drawers, dressing table and closets. These splinterless hardboards (made from exploded wood) are recommended for many remodeling jobs . . . new bedroom, game room, or a re-do for a tired kitchen or bath.
- Write for data on the Masonite building materials to Masonite Corporation, Dept. AF-1, 111 W. Washington St., Chicago 2, Illinois.

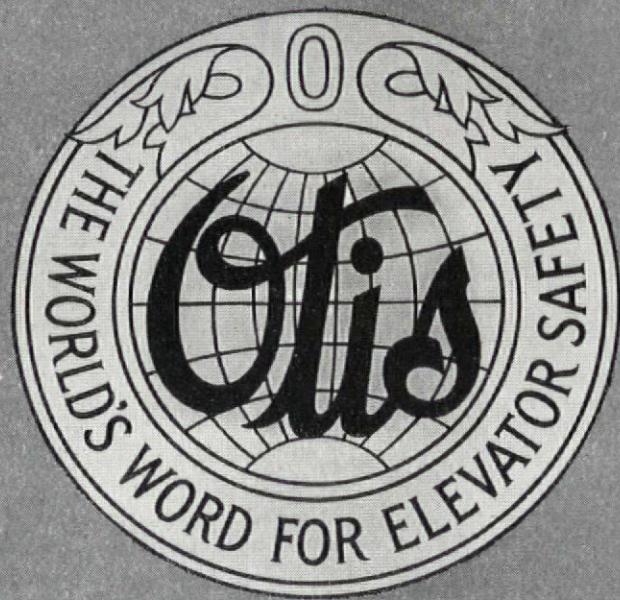
\*"Masonite" is a trade-mark registered in the U. S. Pat. Off., and signifies that Masonite Corporation is the source of the product.

**MASONITE**



**BRAND PRODUCTS**

**PRODUCTS OF THE STATE OF MISSISSIPPI**



## THE MEANING OF THE OTIS TRADEMARK

To the millions of daily passengers on Otis elevators and escalators, the Otis trademark or name-plate means safe, convenient, energy-saving transportation.

To thousands of building owners and managers, the Otis trademark means the utmost in safe, efficient, economical elevator and escalator operation.

To Architects and Engineers, "Otis" means prompt, authoritative cooperation from any one of 245 local offices organized to render service based on the cumulative experience of the Otis Elevator Company.

For the finest in vertical transportation tomorrow, call your Otis representative today.

**OTIS ELEVATOR COMPANY**

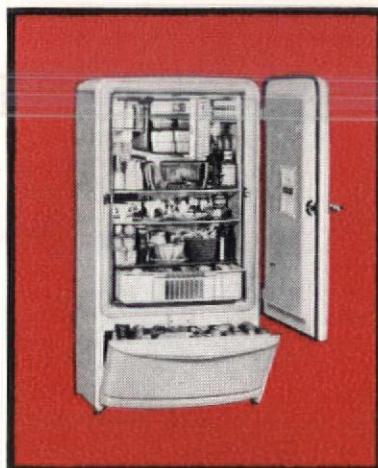
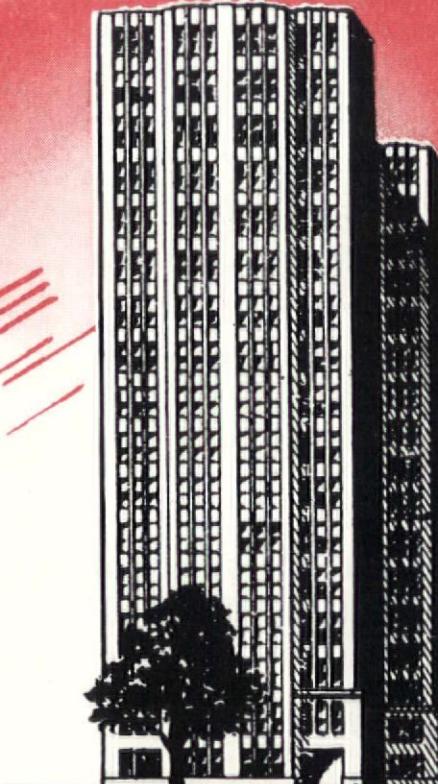
Offices in all principal cities

FINE BUILDING  
 FINE APARTMENTS  
*fine* EQUIPMENT

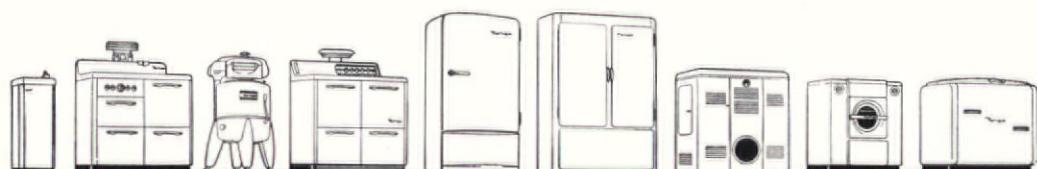
Well known and much admired, "6230 Kenmore Avenue" in Chicago expresses *modern living* at its best. Ross, Browne & Fleming sponsored the project, which was designed by Frank McNally and built by A. L. McNally. One hundred and thirty-four apartments in all. Norge Rollator refrigerators and Norge gas ranges contribute to the convenience and efficiency of these much-sought-after apartments.

NORGE DIVISION, BORG-WARNER CORPORATION  
 DETROIT 26, MICHIGAN

In Canada: ADDISON INDUSTRIES, LTD., TORONTO, ONT.



See NORGE Before You Buy

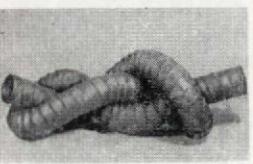


WATER COOLERS • GAS RANGES • RO-TA-TOR WASHERS • ELECTRIC RANGES • ROLLATOR REFRIGERATORS  
 COMMERCIAL REFRIGERATION • HOME HEATERS • AUTOMATIC CYCLE WASHERS • HOME AND FARM FREEZERS

**NORGE** HOUSEHOLD APPLIANCES

## FLEXIBLE TUBING for portable or semi-permanent handling of air, gases or light solids.

This new type of flexible tubing is non-collapsible under plus or minus pressures and is retractable to about one-eighth its extended length. A spring steel helix core causes it to spring out to full extended length, and it will maintain this position whether working on pressure or suction. Feature of the construction is the method of spiral stitching the spring core



within the fabric. There is no exposed metal inside or out, thus possibility of sparking is eliminated. There is little resistance to air flow and no obstruction to the passage of solids. Sharp bends may be made with only slight reduction of air flow without the use of elbows or special fittings. Built-in couplings permit quick joining or

disconnection of tubing. Standard Spiratube is made of long fiber-duck having a bursting strength of 170 psi. The fabric is fire resistant and covered with tough, durable thermoplastic. It has been used by the Navy in shipyards, and vessels. At present it is proving successful for such applications as removing dust in grinding operations; removing sawdust in wood working; removing welding fumes; and in grain and flour milling and conveying. It is furnished in diameters of from 3 in. to 16 in., and in 10 ft. 15 ft. and 25 ft. lengths.

*Manufacturer:* Spiratube Division, The Warner Bros. Co., Bridgeport, Conn.

## ALUMINUM BLINDS show heat reduction of 75 per cent

Aluminum has been incorporated in the slats of a new line of venetian blinds. One side of the slat is polished to reflect heat, the other side is satin finished to prevent the metal from absorbing same. Laboratory tests show a heat reduction of 75 per cent. The polished side facing out reflects light to the ceiling area, affording a more even distribution. The satin side on the inside, absorbs dominant colors in the room. An aluminum facia board gives a clean cut appearance. Dust and grease do not adhere to the treated metal, thus maintenance is negligible. They are available for immediate delivery.

*Manufacturer:* MacArthur Smith & Assoc., 134 S. LaSalle St., Chicago 3, Ill.

## WAR-BORN all-purpose cleaner now available.

Prepared in powdered form, K.P. soapless cleaner suds instantly in hard, soft or sea-water. It effectively cleans everything from delicate hosiery and woolens to grease caked heavy machinery. Containing no abrasive, it is entirely soluble. Wartime usage by shipping and marine operators showed that the solvent is effective in cutting away grease and grime from marine engines and cargo areas. In heavy steel industries, this new solvent cleaned large castings and grease coated machinery effectively. It has shown satisfactory results in aviation, machine tool, automotive, laundry and restaurant applications. K.P. is available in 50 lb. cartons and 350 lb. drums.

*Manufacturer:* K.P. Chemical Co., 16 W. 46th St., New York 19, N. Y.

## ALUMINUM HAND TRUCKS and industrial wheels.

Airplane fabricating techniques are now being used to construct hand trucks and industrial wheels of light metals. Wheels cast of aluminum with rubber tires molded firmly on by a new and unique process, are being built in 6 in., 8 in., 10 in. and 12 in. diameters. They are designed for use on hand trucks, dollies and all rollable industrial equipment. Weighing as little as 3 lbs., they are built to carry 40 per cent more weight than any wheel of equivalent size. The line of feather-weight hand trucks having a one-piece cast aluminum frame has been proved by tests to be at least five times stronger than conventional wood and steel models. The smallest of three sizes weighs 36 lbs., and has been stress-tested under a 5,000 lb. load.

*Manufacturer:* Northrop Gaines, Inc., 1985 E. 16th St., Los Angeles, Calif.

## CONCRETE MIXER affords easier and better operation.

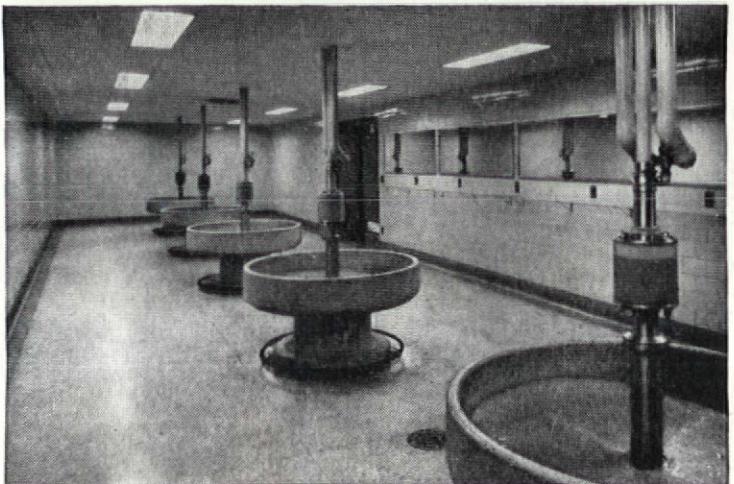
The new Rex 6 S includes a completely redesigned chassis, low over-all height, wide wheel tread and low center of gravity, thus making it easy to park, tow or spot. Controls grouped on one side of machine, a new water system and drum design result in easier operation and better mixing qualities.

*Manufacturer:* Chain Belt Co., 1600 W. Bruce St., Milwaukee, Wis.

*(Continued on page 188)*

*Bradley Helped Eliminate the  
Unsafe, Dirty Factory Washrooms*

## TODAY . . America's Clean, Sanitary Washrooms Are the Best in the World



Practically alone—starting 26 years ago, Bradley campaigned for better, more sanitary factory washroom and toilet facilities. . . . Years of advertising, sales work, and educational effort have helped make factory operators see the benefits of modern washrooms. Leading architects have specified Bradleys for many years.

Bradley Washfountains, for example, save space, cut water consumption, reduce piping connections. One Bradley takes the place of 8 to 10 "single-person" wash basins, providing ideal facilities for 8 to 10 persons simultaneously. The clean running water from the central sprayhead means complete sanitation with all water carried away by the self-draining bowl. Fewer fixtures, fewer piping connections and the elimination of dozens of faucets insure the very minimum of maintenance.

Today Bradleys are installed in plants, schools, and institutions throughout the country. **BRADLEY WASHFOUNTAIN CO., 2235 W. Michigan Street, Milwaukee 1, Wisconsin.**

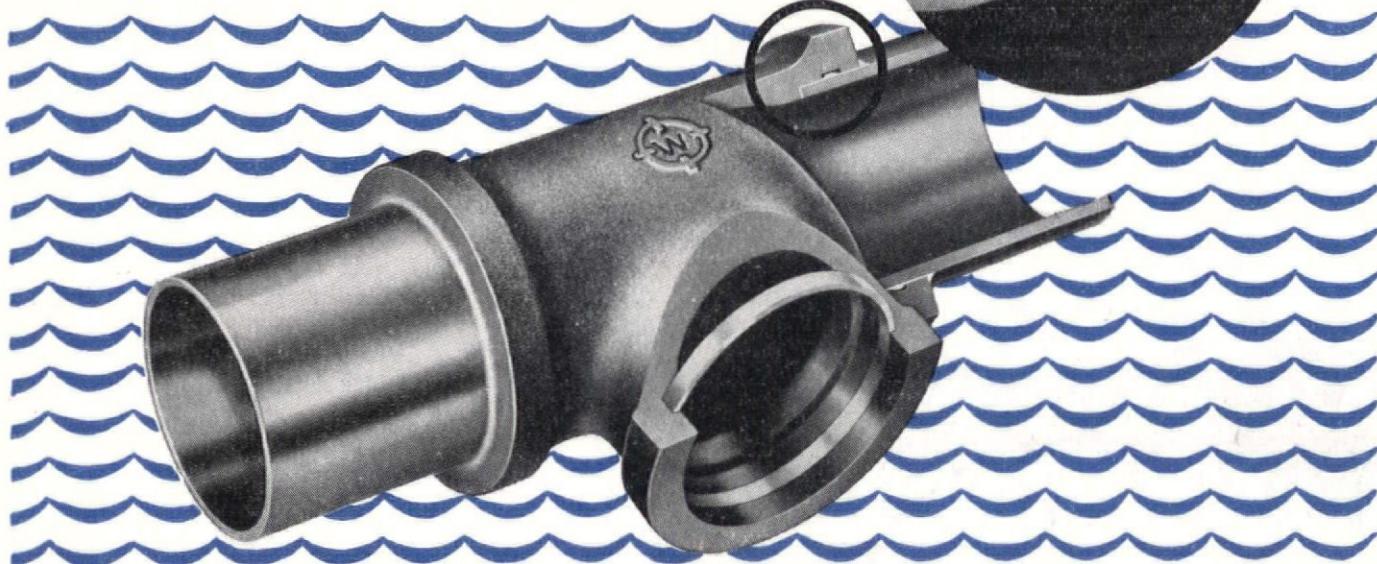


Write for Washing Facilities Survey Blanks and Catalog 4308. They are Free.



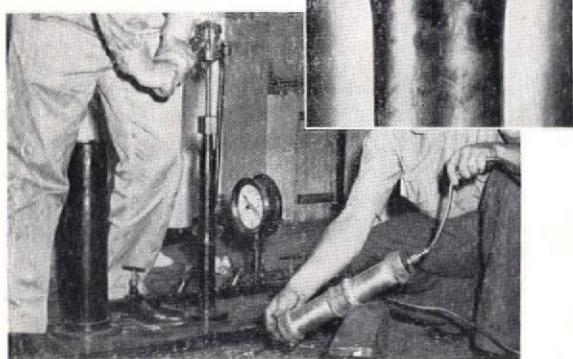
**BRADLEY**  
washfountains

# Silbraz\* JOINTS



.. are permanently **LEAK-TIGHT**

The strongest guarantees of the leak-tight quality of Silbraz joints, are the thousands of pressure tests under a wide variety of conditions that SIL-FOS brazed joints have successfully met.



\*Patented  
Reg. U.S. Pat. Off.

A copper or brass pipe or tubing system constructed the threadless way—with Silbraz joints—is the counterpart of a system without a joint. It is **leak-tight for life**.

The factor which assures this property is the low-temperature brazing alloy—**SIL-FOS**—that makes the Silbraz joints. Rings of this alloy come as inserts in the bores of fittings, flanges and valves used in making up a piping system of this type.

SIL-FOS when heated is so free-flowing that the instant its low flow point of 1300°F. is reached, it penetrates throughout the joint area and diffuses into pipe and fitting surfaces—forming a practically homogeneous union that **matches solid metal** in strength, ability to withstand shock and vibration and permanent leak-tightness.

Leak-tightness is one of the important reasons why a non-ferrous pipe or tubing system made with Silbraz joints is such a sound and satisfying investment.



---

**H A N D Y & H A R M A N**



**82 FULTON ST., NEW YORK 7, N. Y.**

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Agents in Principal Cities

## ABRASIVE WHEELS cut concrete, brick, glass, tile and other non-metallic materials.

Felker Di-Met Rimlocks are thin blades of copper or steel with diamond dust embedded approximately  $\frac{1}{8}$  in. in the periphery. They are available in a wide range of sizes and can be used on Felker Di-Met Cut-off machines, ordinary table saws, portable electric handsaws or similar equipment having adequate spindle speeds. Relatively inexpensive and long lived, they furnish an economical means of sawing many materials that have heretofore been impractical or uneconomical to cut. In ordinary use Rimlocks outlast several abrasive wheels. They can be used to cut such building materials as concrete, brick, cement-asbestos, tile, glass, marble, granite and many other similar hard, non-metallic materials.

*Manufacturer:* Felker Manufacturing Co., 1128 Border Ave., Torrance, Calif.

## TWO COLOR SPRAY GUN produces dimensional finishes in one operation.

Dimenso, a newly developed spray gun which sprays two colors simultaneously through one nozzle, makes possible in one operation two coat spatter finishes and simulated hammered finishes which give the effect of iridescent metal. Suitable for lighting fixtures, air conditioning equipment, cabinets, hardware and other metal products where a finish combining beauty and durability is desired, Dimenso provides a finish that is faster and cheaper than conventional hammer and spatter finishes requiring two or three operations. The Dimenso



gun resembles ordinary spray guns in appearance and operation but has an additional fluid inlet near the head to accommodate the second color paint. A number of pattern styles are obtainable with the new gun which is leased from the company. New patterns and enamels formulated for customers will be registered for exclusive use in their fields.

*Manufacturer:* The Sherwin-Williams Co., 101 Prospect Ave. N.W., Cleveland, Ohio.

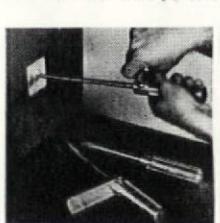
## DOLLIES for shifting heavy objects.

Skid-Rol dollies, obtainable in pairs, can move loads from 10 to 12 tons. Carrying the load only a few inches from the floor, dangers involved in handling wooden rollers are eliminated. To move an object, the load is jacked up about 6 in. and a parallel pair of dollies are positioned under the center of gravity of the load to provide proper balance. Jacks are then removed. If inverted, Skid-Rols can be used for a standing dolly for moving steel beams, girders, etc. Each dolly is  $1\frac{1}{2}$  in. by  $10\frac{1}{2}$  in. by 4 in. high, and is equipped with four steel rollers  $3\frac{3}{4}$  in. in diameter.

*Manufacturer:* Techtmann Industries, Inc., 828 North Broadway, Milwaukee 2, Wis.

## SCREW DRIVER has extra grip for both hands.

This new tool for maintenance men, assembly line workers, engineers, plumbers, and carpenters loosens rusted screws and tightens others beyond the limits of an ordinary screw driver. Known as Tuffy, the tool is a screw driver with an aluminum arm attachment.



This arm affords a solid horizontal hand support that allows full hand and body pressure to prevent slipping or gashing of screw head. With the power arm folded back into the handle, the tool becomes a standard type screw driver. Equipped with an aluminum handle and plated steel blade,

Tuffy is made in 5 in. by  $\frac{1}{4}$  in., 6 in. by  $5/16$  in., and 8 in. by  $\frac{3}{8}$  in. length blades.

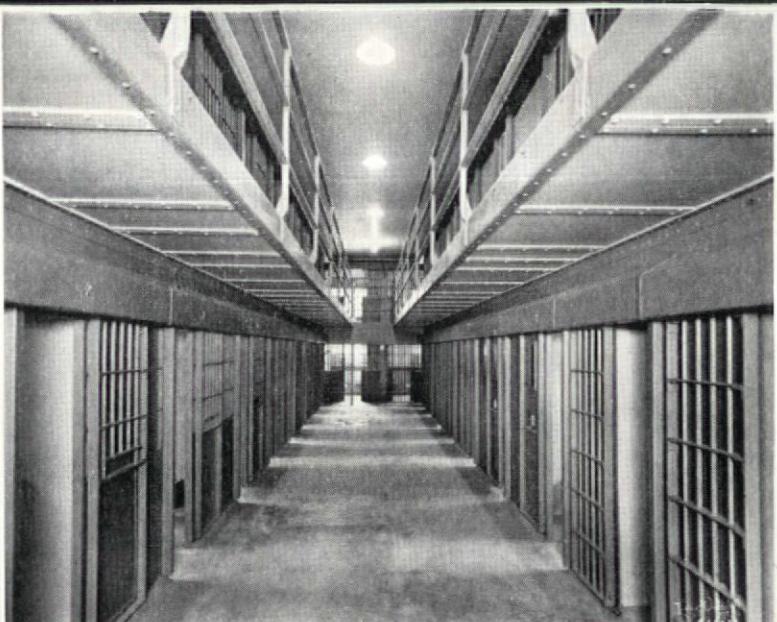
*Manufacturer:* Swallow Airplane Co., Inc., Wichita, Kan.

## PLASTIC T- SQUARE with adjustable protractor head.

Adjustable, plastic T-square is molded of heavy, colorful plastic and has a built-in protractor graduated in degrees. Arm of the instrument allows clear visibility over the drawing surface and is fastened to the head so as to pivot to any angle. It is also equipped with brass lugs to permit ink ruling. Interchangeable arms are available in 12 in., 18 in., 24 in., and 30 in.

*Manufacturer:* C-Thru Ruler Co., 385 Capitol Ave., Hartford, Conn. (Technical Literature, page 192)

## JAIL AND PRISON EQUIPMENT

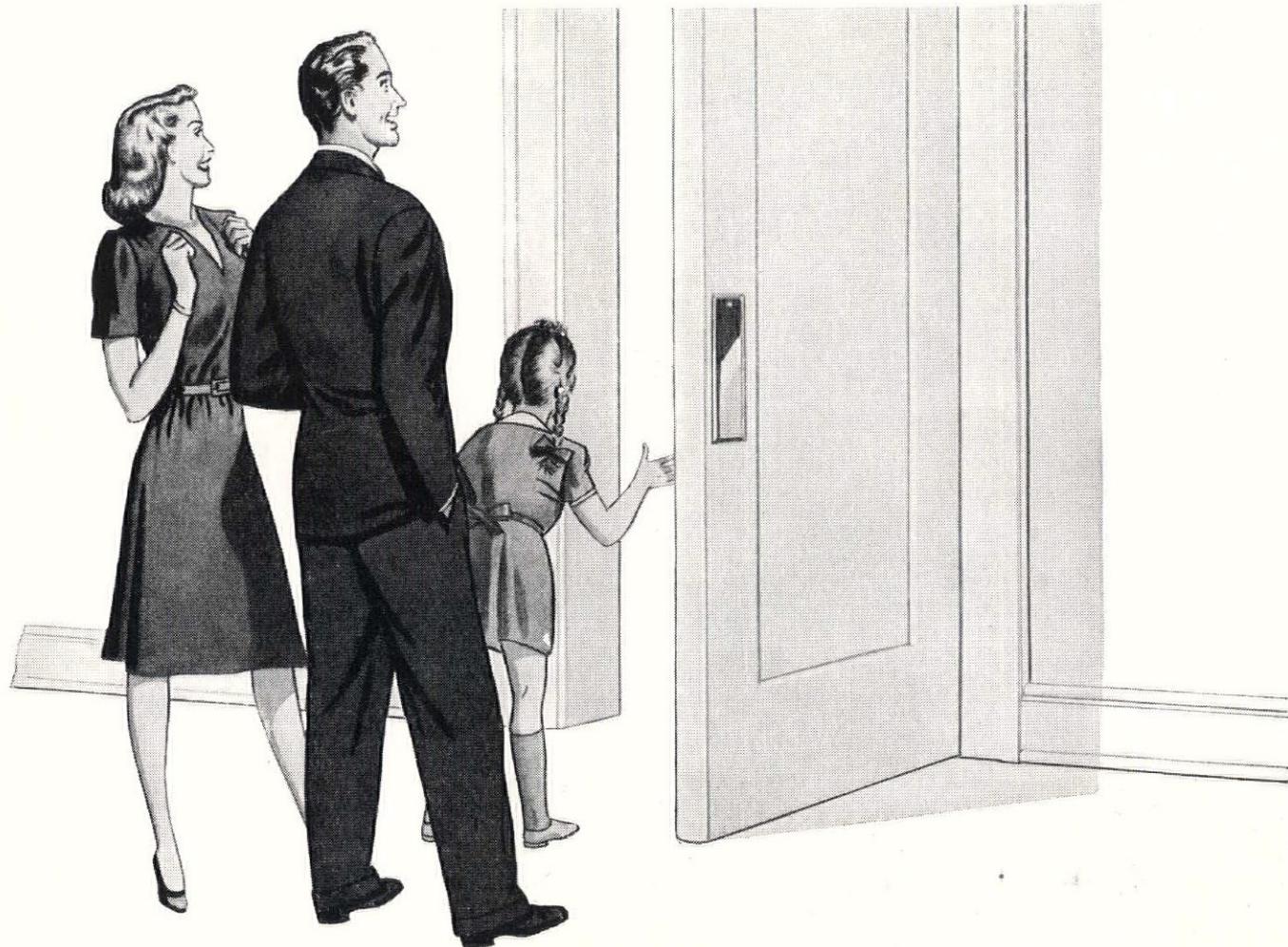


Our engineers will gladly give architects, builders and penal authorities the benefit of many years' experience in the jail building field. Layouts, estimates and complete information on grating and plate cells, doors, lock and locking devices, bunks, tables, seats and every accessory for new construction or the remodeling of old buildings. Stewart Non-Climbable Chain Link Wire Fence is ideal for jail yards and exercise areas. Full details sent on request.

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*New!*

In this *new AMERICAN KITCHEN* your customers see all the breathtaking beauty ever promised the postwar world.

*New!*

In this *new AMERICAN KITCHEN* your customers experience the energy-saving conveniences recommended by experts and approved by homemakers.

*New!*

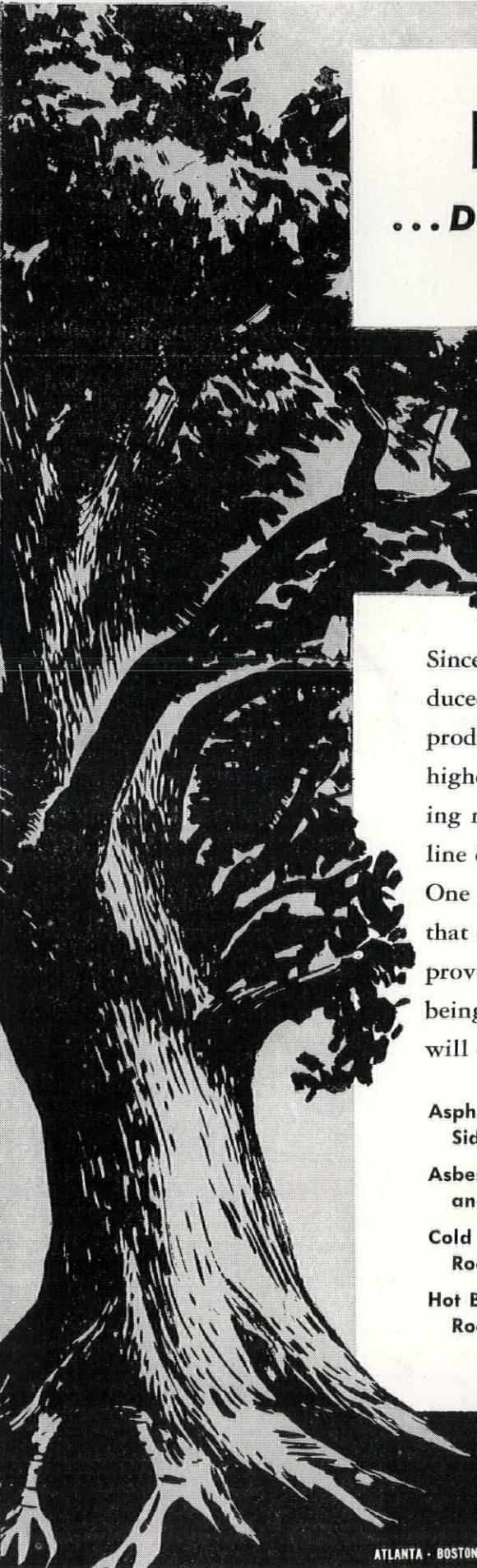
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**NEW!** *American*  
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Those unable to attend Chicago's Housewares Show, January 4, or the Merchandise Mart are invited to write us for the photos, facts and the full profit story contained in the new full-color folder.



# FLINTKOTE

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Since the first Flintkote roofing materials were produced in 1901, this name has appeared on one new product after another . . . always products of the highest quality. Today Flintkote offers not only roofing materials, but sidings, insulation and a general line of building materials as well.

One excellent reason for this year-by-year growth is that each item is subjected to intensive research and proven to be worthy of the Flintkote name, *before* being added to the line . . . and that's how Flintkote will continue to grow.

**Asphalt Roofing and  
Siding Products**

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and Siding Products**

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*Building Materials Division*

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REALLY WANT IS

*Electrical Living*

WIRING HANDBOOK

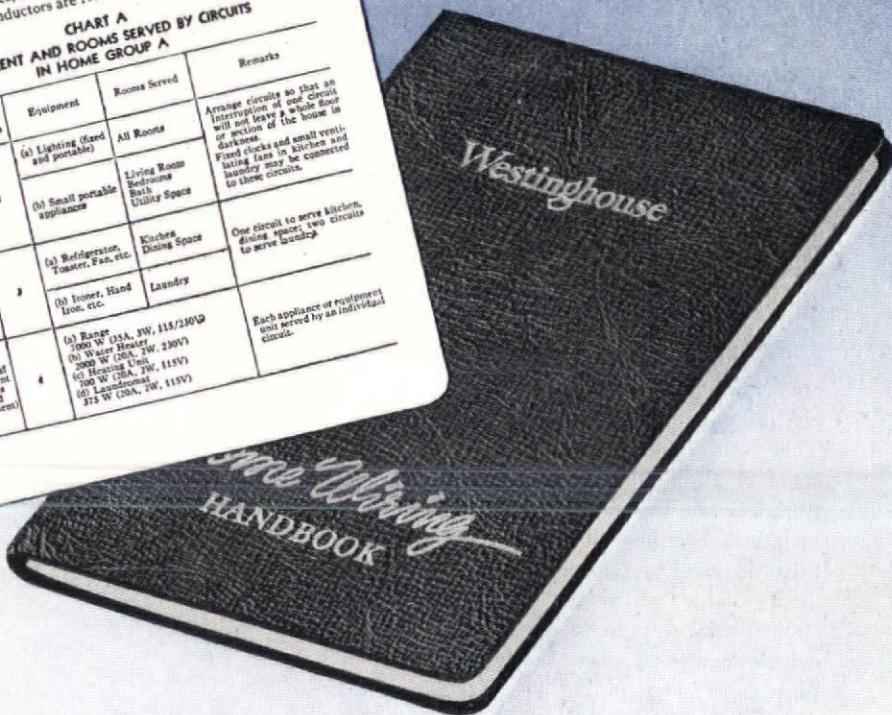
Individual pieces of equipment should have  
enough for the load which they supply. The  
determining size of circuits for cooking  
is rated at 7,000 watts, for ranges rated up to

Electrical Code classifies circuits as 15, 20, 25, 35  
ampere branch circuits and individual branch circuits.  
The minimum size of conductors that can be used for any circuit  
is the size having a carrying capacity equal to the rating or setting  
of the over-current device protecting the circuit. If conductors of a  
larger size are used in order to reduce the voltage drop, the  
change in size of the conductor does not change the classification  
of the circuit. For example, if the rating of the over-current  
device is 20 amperes, the circuit is a 20-ampere circuit, regardless  
of whether the conductors are Nos. 12, 10 or larger.

CHART A  
EQUIPMENT AND ROOMS SERVED BY CIRCUITS  
IN HOME GROUP A

Type of Circuit	Number of Circuits	Equipment	Rooms Served	Remarks
General Purpose (15-Ampere) Circuits	1	(a) Lighting (fixed and portable)	All Rooms	Arrange circuits so that an interruption of one circuit will not leave a whole floor or section of the house in darkness. Fixed closets and small venti- lated fans in kitchen and laundry may be connected to these circuits.
Appliance (20-Ampere) Circuits	3	(b) Small portable appliances	Living Room Bedrooms Bath Utility Space	
Individual Equipment Circuits (Fixed Equipment)	4	(a) Refrigerator, Toaster, Fan, etc.	Kitchen Dining Space	One circuit to serve kitchen, dining space; two circuits to serve laundry.
		(b) Iron, Hand Iron, etc.	Laundry	
		(c) Range 3000 W USA, 3W, 115/230V (d) Water Heater 3000 W (20A, 2W, 230V) (e) Motor Unit (f) Range (20A, 2W, 115V) (g) Laundry 375 W (20A, 2W, 115V)		Each appliance or equipment unit served by an individual circuit.

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FOR THE RIGHT NUMBER OF  
CIRCUITS TO MAKE PEOPLE  
REALLY WANT YOUR HOUSES



Tomorrow's homeowners will expect their homes to be wired so they can enjoy the full convenience of Electrical Living.

That means enough circuits and outlets, wire of ample size, modern circuit protection, and quality wiring devices and workmanship.

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include in each of four groups of homes in the popular price class. A typical page is shown above.

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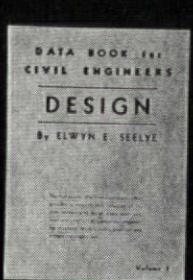
City..... State.....

  
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194X (Professional Edition); Manual of Better Home Wiring.

# TECHNICAL LITERATURE



**DATA BOOK FOR CIVIL ENGINEERS, Volume I, DESIGN**  
by Elwyn E. Seeley. John Wiley and Sons, Inc., New York. 684 pp. Illustrated. 9½ in. by 11¾ in. \$7.50.

Equivalent to Ramsey & Sleeper's *Architectural Graphic Standards* in the architectural field, this new handbook for engineers makes readily available effective data in each main field of civil engineering—structures, sanitation, water supply, drainage, roads, airfields, dams, docks, bridges and soils. Modern codes, practices and designs are emphasized. It gives constants of nature, rules of practice, design formulas, details of engineering structures and is replete with useful tables and diagrams. Explanations and derivations have largely been eliminated with notes on the plates giving necessary explanations and guidance. Clarity of presentation is achieved by full use of illustrative details and examples. The section on structure fully covers concrete, steel, wood, plywood, and foundations and includes tables, illustrations and examples. Sections on soils, earthwork, roads, railroads, airports, bridges, transmission towers, dams, docks and piers, corrosion of metal, drainage, drainage and sewage, sewage treatment, waste disposal, water supply, water purification and water distribution are all fully informative and complete.

**PRACTICAL DESIGN HANDBOOK FOR ENGINEERS. CALCULUS FOR PRACTICAL ENGINEERS** by Dr. Alois Cibulka. Clarke & Courts, Houston 1, Texas. 400 pp., 100 pp. 12 in. by 9½ in. \$6.00. \$3.00.

The new enlarged edition of *Practical Handbook for Engineers* contains information, tables and charts accumulated and compiled from 30 years' engineering experience. It includes hundreds of illustrations and practical examples, with charts and tables to facilitate solving of difficult problems. This book includes three formerly separate publications: Refinery Piping Design, Modern Welded Steel Structures, Aerial Cable Tramways. Contents, divided into 10 sections, include: a complete theory of strength of materials and structures in steel, reinforced concrete, timber, etc.; complete theory of modern welded steel structures; treatise covering statically indeterminate structures; direct solutions without calculations for pressure and vacuum vessels and industrial piping; refinery piping design; shafts, gears, belts; hydraulics, heat transfer, refrigeration; aerial cable tramways; complete tables of numbers and squares, engineering conversion tables, etc. *Calculus for Practical Engineers* is a self-teacher manual explaining calculus without theories, and giving hundreds of illustrations and practical problems.

**GLASS.** Planning Ahead With Glass for More Enjoyable Living, 28 pp., 8½ in. by 11 in., 10 cents.

Many uses of glass and mirror which add charm and spaciousness to the home are fully illustrated in this booklet. Many window types, some featuring Thermopane, the insulating window pane, are pictured and their features described. Applications of glass products in windows, closet doors, screens, partitions and tables, and mirrors for walls, doors, occasional use, table tops, etc. are illustrated room by room. Uses of Vitrolite, the colored structural glass, are also included. A section is also devoted to glass cold frames, solariums, window wells and miniature greenhouses. Solar heating is treated briefly with diagrams of sun angles, details of sun visors, renderings and photographs of several solar houses. Libbey-Owens-Ford Glass Co., Nicholas Building, Toledo 3, Ohio.

**GYPSUM STANDARD.** American Standard Building Requirements, Reinforced Gypsum Concrete, (A59. 1-1945). 6 pp., 7¾ in. by 10½ in., 25 cents.

Revised standard covering design, construction and use of

reinforced gypsum concrete for floors and roofs, reaffirms many of the original detailed definitions but also includes results of four years' experience with the building material. For example, a new section relates to position of gypsum concrete slabs in relation to the floor beams and roofs when they are installed by the suspension system. The standard is divided into five sections:—Materials, Strength of Gypsum Concrete, Allowable Stresses, Design and Inspection. American Standards Assoc., 70 East 45th St., New York 17, N. Y.

**HUMIDITY CONTROL.** SC Kathabar Humidity Control System You Can Now Do Something About It, 4 pp., 6 pp., 8½ in. by 1 in., 8½ in. by 12 in.

These booklets describe balanced humidity control units for automatically producing the exact atmospheric conditions for a particular need. *SC Kathabar Humidity Control System* covers the single packaged unit developed for smaller demands. Diagrams and text explain the principle of operation. General specifications, uses and typical application diagrams are included. *You Can Now Do Something About It* briefly tells the story of Kathabar for large installations. The two major system parts, Contactor and Regenerator, are illustrated and described in a section devoted to How Kathabar Operates. Surface Combustion Corp., 2375 Dorr St., Toledo, O.

**HOSPITAL HEATING.** A Step Ahead in Hospital Heating, Bulletin No. 633, 24 pp., 8½ in. by 11 in.

How Dunham Differential Heating Systems have met and will meet comfort requirements of hospitals with economical operation is the subject of this informative brochure. System controls of both temperature and volume of steam are explained by details and text. Functions of each operative part comprising the system and method of control are outlined. A technical reprint describes the installation at the University Hospitals, Western Reserve University, recording actual installation data and operating efficiency. Conversion of heating systems to the Differential method is discussed and letters and comparative cost data emphasize features of the system. C. A. Dunham Co., 450 E. Ohio St., Chicago, Ill.

**HEATING.** Town of Tomorrow, 42 pp., 11 in. by 8¾ in.

This brochure reviews many types of present day architecture which incorporate gas heating. Homes pictured feature automatic gas heating while text lists space advantages and economies resulting from compact installations. Floor plans, exterior views and interior details are presented for a representative collection of designs from all geographical areas. Basement design, description of insulation methods and a pictorial summary of Bryant home heating equipment with a description of each is also included. The Bryant Heater Co., 17825 St. Clair Ave., Cleveland 10, Ohio.

**CONVECTORS.** Modine Convector Radiation For That New Home You're Planning, 4 pp., 8½ in. by 11 in.

The comfort, convenience and appearance of Modine Convector heating in homes are briefly described in this illustrated folder. Method of operation and other features are also included. Modine Manufacturing Co., Racine, Wis.

**FURNITURE.** A Sketchbook of Tables and How to Use Them, 24 pp., 6 in. by 9 in.

This sketchbook is prepared to aid the user in making the greatest decorative and functional use of tables in the home. Sketches illustrate tables used with sofas, at the fireplace, in corners, with chairs, and at windows. Usual uses for tables are also included. An enclosed (Continued on page 194)



## WHEN YOUR CLIENTS READ THIS Your Job becomes Easier!

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We're distributing this book nationally at \$1.00 a copy. We believe it's the biggest planning book value offered today. Send your check or a dollar bill for your copy now. After reading it, you'll probably want to order additional copies for use with your prospects. Write Dept. AF, Surface Combustion Corp., Toledo 1, Ohio.

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# Janitrol



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Gravity Furnace



Conversion Burner



Unit Heater



Boiler



Floor Type Blower Unit

**GAS-FIRED  
HEATING EQUIPMENT**

portfolio photographically presents most of those sketched giving sizes and more pertinent information. The Brandt Cabinet Works, Inc., Hagerstown, Maryland.

**HOME PLANNING.** *Let's Plan A Peacetime Home*, 114 pp., 8½ in. by 11 in. \$1.00.

Home Planners will find a storehouse of valuable information in this step-by-step guidance for interior and exterior planning, furnishing and equipment. Authored by experts on architectural, interior decoration and heating problems, the booklet includes discussions of general principles and functional planning for both new home planners and remodelers. Eight basic exterior designs are presented with a complete section devoted to works of well-known modern architects. Functional planning of the living room, bedroom, kitchen

and laundry receive special attention. Practical discussion on materials and equipment include advantages of various heating systems, fuels, air conditioning, lighting and kitchen appliances. Advice on renovation, structural requirements and other guidance features are included for the remodeler. Ways to own a home and finance it, complete the discussion. Surface Combustion Corp., 2375 Dorr St., Toledo, Ohio.

**HOUSE PLANS.** *Twenty New Prize Contest Small House Plans*, 30 pp., 8½ in. by 11 in. 10 cents.

Twenty floor plans, prize winners of the design contest sponsored by the Bituminous Coal Institute for homes in the \$6,000 price range, are presented here. They feature various ideas and suggestions for construction and of furnishing the basement, which are, according to the Institute, achievable through economies realized with the use of Bituminous coal heating. Also included is a section devoted to suggestions on how to plan the heating plant for satisfaction. This contains helpful information about heating units, stokers, construction and location of chimney and coal bin, and the efficient coordination of these units of the heating system. Bituminous Coal Institute, 60 East 42nd St., New York 17, N. Y.

## REQUESTS FOR INFORMATION

**L.T. DAVID CRISPEN**, Route 2, Clarksville, Tenn. would like to receive information on prefabricated housing manufacturers and products.

**E. J. EDMUNDS**, mason contractor, 204 River St., West Newton, Mass. would like to receive information on masonry and allied products and new application methods.

**H. ROLAND FRAENKEL**, architect and structural engineer, Box 842 Wellington, New Zealand would like to receive literature on construction equipment and products.

**SIDNEY I. GROBSTEIN**, P. O. Box 41, Linden, N. J., would like to receive information on construction materials and equipment for residences and stores.

**L.T. ALFRED C. ROTH**, 3006 Churchill Drive, Corpus Christi, Texas would like to receive information from prefabrication manufacturers.

**L.T. JOHN M. SPOONER**, 1958 Glendale, Toledo 9, Ohio would like to receive information from manufacturers of prefabricated houses. **K & J WILKENS N.V.**, Saw mills, Veendam, Holland, would like to receive information and catalogs on panels, plywoods and woods.

## REQUESTS FOR LITERATURE

**W. F. CASTELLA**, civil engineer, Apt. 29, Naval Ammunition Depot, McAlester, Okla.

**JESSE CUNNINGHAM**, architect, Florida National Bank Bldg., St. Petersburg, Fla.

**FREDERICK A. EASTMAN**, architect, 171 North Meyer St., Tucson, Arizona.

**MANOOG EXERJIAN**, architect, 140 So. Middle Neck Rd., Great Neck, N. Y.

**J. EVERETTE FAUBER, JR.**, architect, Lynchburg, Va.

**PHILIP R. GENTHNER**, Designer, 36 West Ave., P. O. Box 236, Danville, N. Y.

**E. ELLSWORTH GILES**, architect, 113 Morristown Road, Bernardsville, N. J.

**MARTIN HAURI**, architect, 905 Roderigo Ave., Coral Gables, Fla.

**JOSEPH, FLETCHER & JOSEPH**, architects and engineers, 728 North Highland Ave., Los Angeles 38, Calif.

**CHARLES F. KIRKLAND**, architect-engineer, 6842 California Ave., Hammond, Indiana.

**THOMAS LARRICK**, architect, 166 Morris Ave., Athens, Ohio.

**HARRY RAY NAY**, architect, Cadiz Pike, R.F.D. # 1, Martins Ferry, Ohio.

**GEORGE COOPER RUDOLPH ASSOCIATES**, 155 East 44th St., New York, N. Y.

**SHERMAN & ZAMSHNICK**, architects, 62 William St., New York, N. Y.

**ERIC W. SMITH, JR.**, 11 Elm Place, Webster Groves, Mo.

**J. WESLEY OLDS**, 2118 Garfias Drive, Pasadena 7, Calif.

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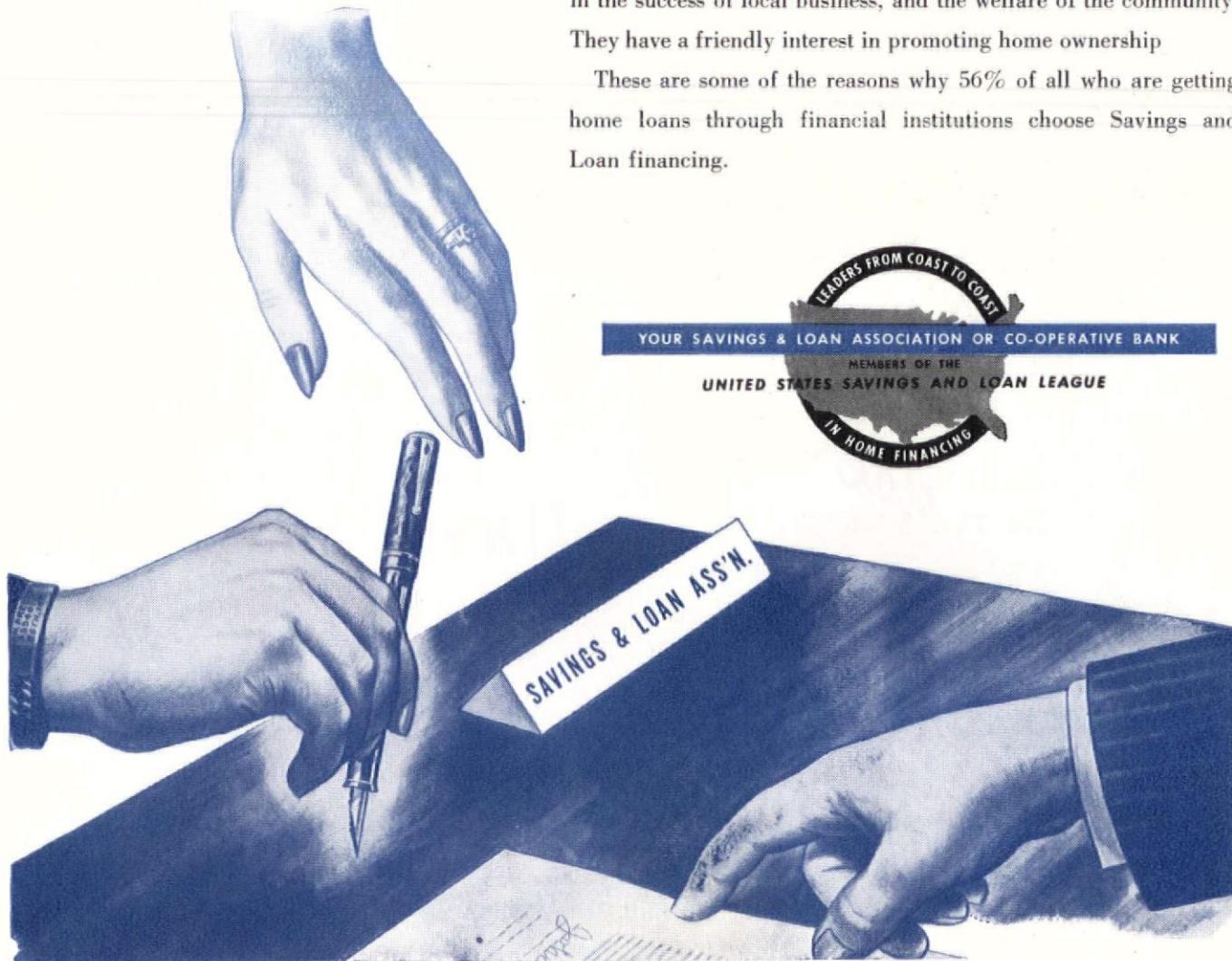
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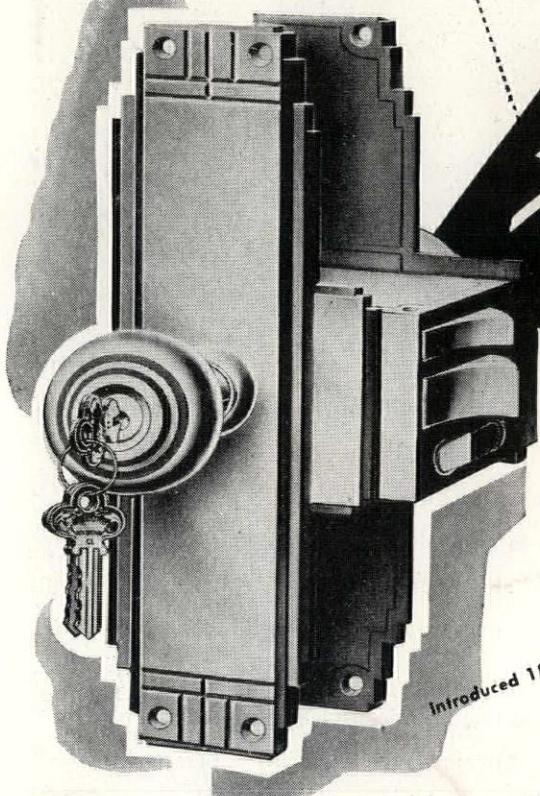
To get quick action on home loan commitments and closing of loans, use your local Savings, Building and Loan Association or Co-operative Bank. Both you and your customer will save time. And you can complete more sales.

This quick service is possible because these institutions have specialized in making home loans for 115 years and know how to avoid delays. They know local values, and give maximum loans at most favorable rates.

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These are some of the reasons why 56% of all who are getting home loans through financial institutions choose Savings and Loan financing.

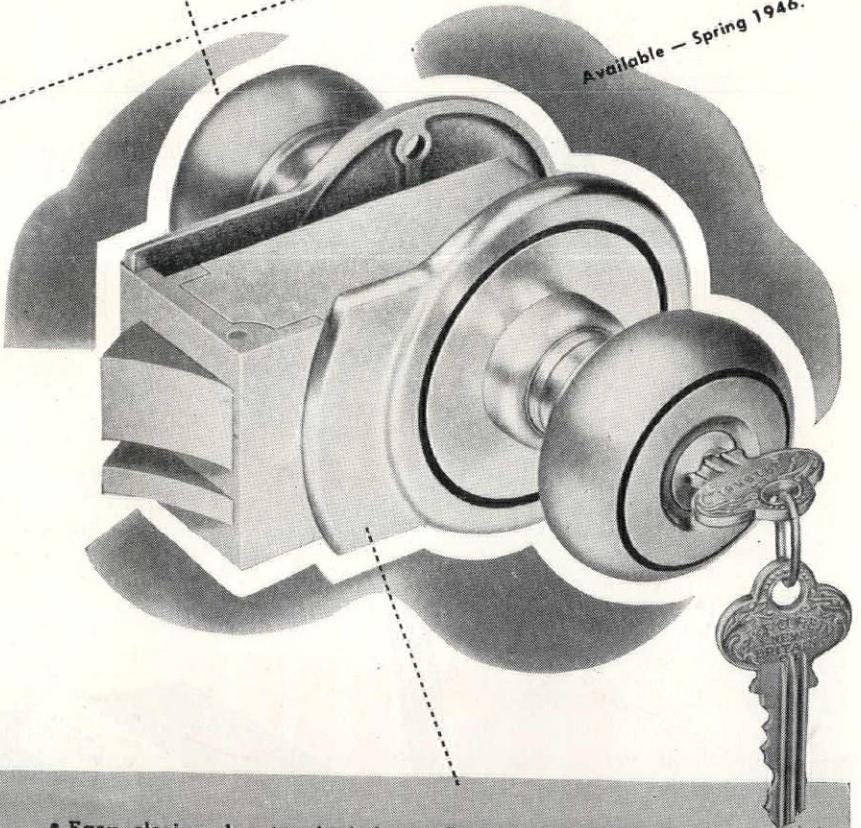




## The Corbin Unit Lock

USED IN THE COUNTRY'S  
OUTSTANDING BUILDINGS  
SINCE 1899 . . .

has been  
adapted for  
Residence  
use



### Quick Facts

- Ease of installation heretofore unknown for residences
- No boring, no mortising for lock case—2 saw-cuts opening, knock out block, install
- Complete factory assembly

- Easy closing due to pivoted (swinging) latch
- For 1 3/4" thick doors
- Eye-appealing 2" knob
- Solid frame cast in one piece

- Complete masterkeying for key locks when desired
- Push button locking and latch release for bathrooms
- Reversible for right and left hand doors

# P. & F. Corbin



Division of The American Hardware Corporation

Good Buildings Deserve Good Hardware



New Britain, Connecticut • Since 1849.



3

stories - 40,000 feet high!

# BOHN

Here's an interior view of one of the three-decker stratosphere planes that one day may be making non-stop flights between Europe and America. This is only one of the amazing things the world of tomorrow holds in store for us. In many of these new products and in improvements of many products in daily use—the light alloys, magnesium and aluminum, will play an important part in effecting weight reductions, reducing operating costs. Bohn Engineers will be glad to consult with you in fitting these versatile light alloys into your production plans.

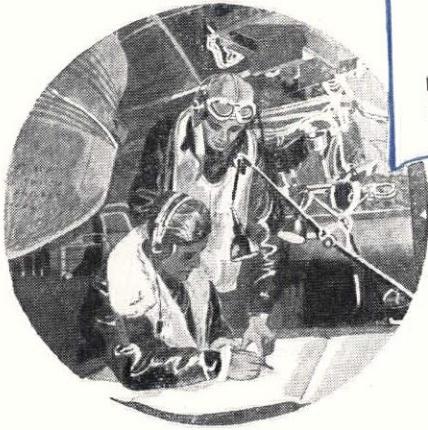
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ALUMINUM • MAGNESIUM • BRASS • AIRCRAFT-TYPE BEARINGS

# SPECIFICATION AND BUYING INDEX

The advertising pages of **FORUM** are the recognized market place for those engaged in building. A house or any building could be built completely of products advertised in **THE FORUM**. While it is not possible to certify building products, it is possible to open these pages only to those manufacturers whose reputation merits confidence. This **FORUM** does.

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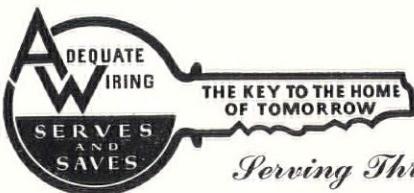
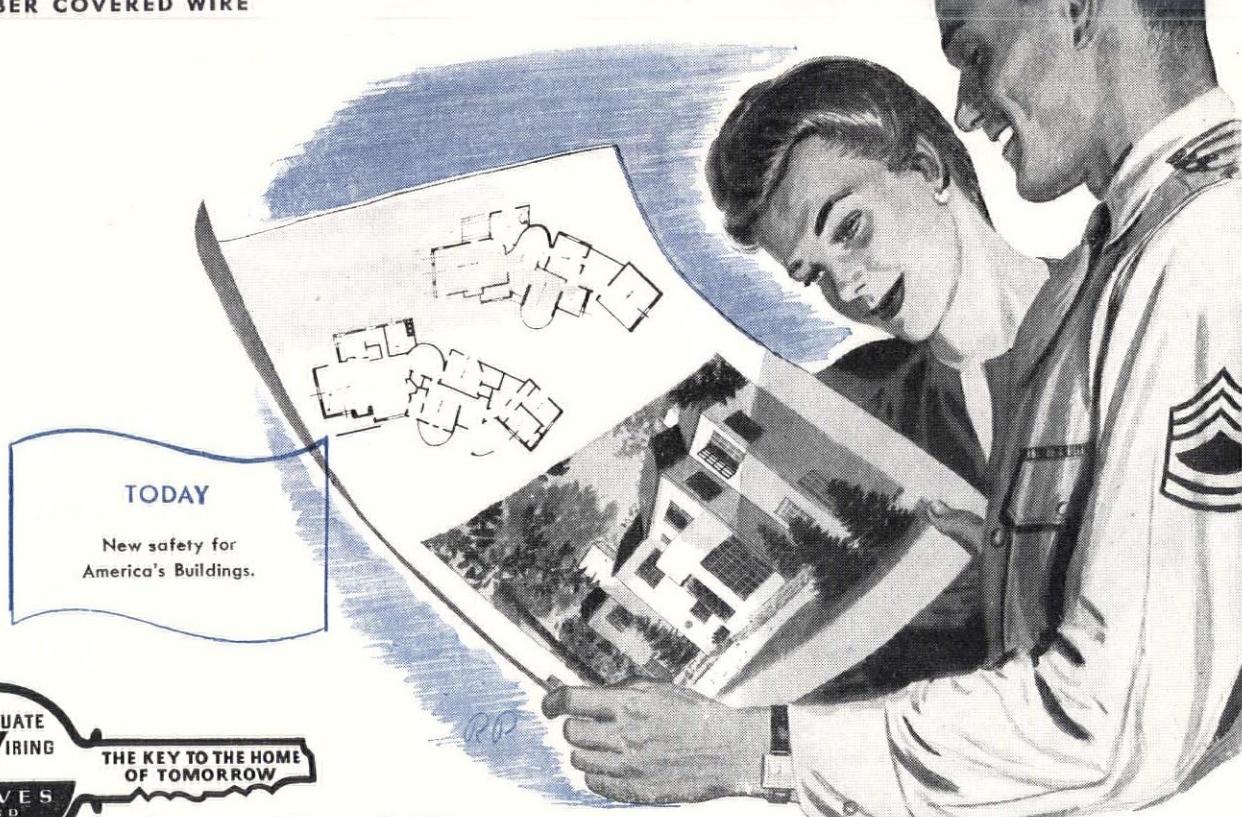
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